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ABSTRACT

This study contains analyses of trends in the level of university research and development expenditures in the sciences and engineering from 1964 through 1973. The report is divided into three main sections: (1) current research and development expenditures in the sciences and engineering; (2) capital expenditures for research, development, and instruction in the sciences and engineering; and (3) current direct expenditures for instruction and departmental research in graduate-degree-granting institutions in the sciences and engineering. Statistical tables show current research and development allocations according to: (1) source of funds, (2) type of research and development activity, (3) field of science, (4) type of control, (5) type of institution, (6) geographic distribution, and (7) concentration of research and development expenditures. The study also distinguishes between universities and colleges and federally-funded research and development centers administered by universities and colleges in the reporting of data. (Author/CP)

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Expenditures for Scientific and Engineering Activities at Universities and Colleges Fiscal Year 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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HIGHLIGHTS

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"Academic R&D Expenditures Up 9 Percent in 1973"	74-306	——

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FOREWORD

During the last several years institutions of higher education have experienced growing financial stress, changing attitudes of students and educators alike, and new demands by society on the educational system. As the Nation's most important source of basic research and scientific manpower, our universities and colleges are the subjects of many studies undertaken by Federal and State Government officials and private organizations designed to assess the general state of health of these institutions and to develop policies that will ensure their stability.

One area of major concern to university administrators is the decline in Federal support of sponsored research. During the sixties sponsored research, particularly on Federal projects, became an integral part of academic activities, and university staffs were expanded to meet the needs of Federal programs. With the recent decline in Federal funds, universities are experiencing difficulty in retaining those highly qualified scientists and engineers and, in some cases, have been forced to dip into nonresearch budgets to maintain their research capabilities.

This study contains analysis of trends in the level of university research expenditures in the sciences and engineering by source of funds and other characteristics from 1964 through 1973. Prior reports in this series contained analyses of both expenditure and manpower data and were published under the title *Resources for Scientific Activities at Universities and Colleges*. Beginning with this report, data on university and college R&D expenditures will be published separately from those on scientific and technical manpower. Studies of academic R&D activities comprise an integral part of NSF's continuing program of periodic surveys designed to produce information on the scope and character of the Nation's investment in science and technology. Under this program all major sectors of the U. S. economy are covered, including industry, government, independent nonprofit organizations and institutions of higher education.

The Foundation is grateful to officials of universities and colleges for their cooperation in the survey which resulted in an institutional response rate of 92 percent and participation by all of the 100 largest R&D performers.

The report was prepared in the Division of Science Resources Studies, Charles E. Falk, Director.

H. Guyford Stever
Director
National Science Foundation

July 1975

general notes

- R&D expenditure data presented in this report refer to *separately budgeted* research and development in the sciences and engineering and exclude departmental research expenditures which are analyzed separately as part of the instructional programs of universities and colleges. Excluded is research performed in the arts and humanities.

- Separately budgeted research and development includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution.

- Departmental research (nonsponsored research) is "personal" or "faculty" research supported by General Funds of the department as a specifically assigned, departmentally planned, or mutually understood part of the faculty member's total activity.

- Current expenditures includes all expenditures made by the institution during the reporting period from both the unrestricted current fund and the restricted current fund. Included are direct and indirect costs. Direct costs include the salaries and wages of those working on a research project, expenditures for small equipment items, materials used, and other expenses specifically identified with the project. Indirect costs are those incurred by an institution in implementing and supporting the entire research project, including "unreimbursed indirect costs".

- The term "expenditures" differs from the
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Ronald Biggar (202-282-7790), Division of
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acknowledgments

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Studies Group by Ronald Biggar assisted
conducted and the report written under the
Director. William L. Stewart, Head of the
provided guidance and review.

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- Statistics shown in this report may not add to totals or subtotals because of rounding.
- All percentage changes in trend statistics represent compound annual rates.
- Figures shown in this report for fiscal year 1973 R&D expenditures represent universe totals for scientific and engineering disciplines. Over 92 percent of the surveyed institutions responded including all of the 100 largest R&D performers. Estimates for nonrespondents and nonsurveyed institutions account for less than 3 percent of the R&D total.
- Unless constant dollars are specified, data shown in this report are in terms of current dollars.
- Additional information concerning survey results should be addressed to Ronald Biggar (202-282-7790), Division of Science Resources Studies, National Science Foundation, Washington, D.C. 20550.

acknowledgments

This report was prepared in the Universities and Nonprofit Institutions Studies Group by Ronald Biggar assisted by James Hoehn. The survey was conducted and the report written under the supervision of Richard Berry, Study Director. William L. Stewart, Head of the R&D Economic Studies Section, provided guidance and review.

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HIGHLIGHTS

- Between 1972 and 1973 R&D expenditures in the sciences and engineering increased 10 percent — an amount considerably higher than the rate of growth reported during the prior two years and more than three times the percent increase for 1974, as indicated by preliminary tabulations from the 1974 survey.[1]
- The 1973 total represents an increase of 6 percent in constant 1967 dollars.[2] This was significantly higher than the 2-percent annual growth in constant dollars experienced in the 1970-72 period. One of the major reasons for the increase was a 7-percent constant dollar growth in Federal R&D support from 1972 to 1973 compared with a 1-percent annual increase in the earlier period.
- Basic research, despite a 2-percent increase between 1972 and 1973, declined as a percent of total separately budgeted academic R&D expenditures from the 76 percent reported in each survey from 1964 through 1972 to 70 percent in 1973. In constant 1967 dollars, basic research dropped 2 percent from the 1972 total. In contrast, applied research and development increased 30 percent and 53 percent, respectively (26 percent and 48 percent in constant dollars, respectively). Increased support from Federal, State, and industrial sources for R&D activities aimed at finding solutions to specific problems, contributed to the larger rates of growth in the areas of applied research and development.
- Over one-half of all academic research is performed in the life sciences. Between 1972 and 1973, such research increased 12 percent, second only to a 14-percent growth in the social sciences. The physical sciences increased only 2 percent during this period which, in constant dollars, resulted in the only decline among the major field categories.
- Public universities and colleges reported inc and development totaling 11 percent betwe 8-percent increase in private institutions. stantially higher in public institutions while reductions from local governments, founda institutions' own funds.[3]
- The top 100 R&D-performing universities of both total and Federal R&D funds in the declined steadily since a high of 90 perc government support was least concentrated largest R&D performers while all other sour percent.
- In the 1964-73 period, institutions granting accounted for approximately 98 percent of in the academic sector. More than one-h doctorate-granting institutions was in the doctorate-granting institutions was less co ranking first with 28 percent of the total sciences, each accounting for an additional
- Capital expenditures for scientific and eng declined 18 percent between 1972 and 19 percent, while all other sources combined 19 percent. Since 1968, when capital ex outlays have declined 9 percent per year in
- R&D expenditures in university-administere Development Centers (FFRDC's) totaled $ more than the $764 million reported in sciences accounted for five-sixths of total R

[1] Preliminary 1974 data published in National Science Foundation, *Science Resources Studies Highlights*, "Separately Budgeted Academic R&D Expenditures Decline in Real Terms in FY 1974" (NSF 75-306) (Washington, D.C. 20550, April 21, 1975). Additional data for 1974 may be obtained by contacting the Division of Science Resources Studies, National Science Foundation, Washington, D.C. 20550 (202-282-7790).

[2] In the absence of a reliable R&D cost index, the gross national product (GNP) implicit price deflator was used to convert R&D expenditures to constant dollars. The GNP deflator includes the effects of the price changes of all goods and services in the economy and therefore can only indicate approximate changes in costs of inputs specifically related to R&D performance.

[3] "Institutions' own funds" refers to expenditures from unrestric the accounting period from sponsors who made no stipulations a

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- Public universities and colleges reported increases in expenditures for research and development totaling 11 percent between 1972 and 1973, compared to an 8-percent increase in private institutions. All sources of support were substantially higher in public institutions while private institutions suffered sharp reductions from local governments, foundations and health agencies, and the institutions' own funds.[3]
- The top 100 R&D-performing universities in 1973 accounted for 83 percent of both total and Federal R&D funds in the academic sector. This share has declined steadily since a high of 90 percent was recorded in 1970. Local government support was least concentrated, with 66 percent going to the 100 largest R&D performers while all other sources ranged from 76 percent to 86 percent.
- In the 1964-73 period, institutions granting doctorate degrees in the sciences accounted for approximately 98 percent of all research performed each year in the academic sector. More than one-half of all research performed by doctorate-granting institutions was in the life sciences. Research in non-doctorate-granting institutions was less concentrated, with social sciences ranking first with 28 percent of the total, followed by life and physical sciences, each accounting for an additional 21 percent.
- Capital expenditures for scientific and engineering facilities and equipment declined 18 percent between 1972 and 1973. Federal support declined 13 percent, while all other sources combined reduced their capital funding by 19 percent. Since 1968, when capital expenditures peaked at $1.1 billion, outlays have declined 9 percent per year in constant dollars.
- R&D expenditures in university-administered Federally Funded Research and Development Centers (FFRDC's) totaled $817 million in 1973, or 7 percent more than the $764 million reported in 1972. Engineering and physical sciences accounted for five-sixths of total R&D expenditures.

[3] "Institutions' own funds" refers to expenditures from unrestricted accounts, including funds expended during the accounting period from sponsors who made no stipulations as to how the funds were to be used.

INTRODUCTION

This report presents the results of the National Science Foundation's ninth Survey of Scientific Activities of Institutions of Higher Education in fiscal year 1973. It also contains preliminary estimates for total R&D expenditures by universities and colleges during fiscal year 1974, which are based on early returns from the 1974 survey.[4] Conducted annually since 1972, the survey of institutions of higher education collects data on current and capital expenditures for research, development, and instruction in the sciences and engineering.

The survey series was instituted in 1954 to assess the overall effectiveness of ongoing Federal R&D efforts to strengthen science and technology in universities and colleges. The information assists the National Science Foundation in fulfilling its responsibilities in supporting scientific research at academic institutions and in the formulation of recommendations on national science policy in keeping with the National Science Foundation Act of 1950 and subsequent amendments.

The 1973 survey was conducted by questionnaires sent to all universities and colleges that grant doctorate or master's degrees in the sciences or engineering and all other academic institutions believed to have R&D expenditures of $50,000 or more. Figures shown in this report represent universe totals for science and engineering; estimates accounting for 3 percent of the separately budgeted R&D total were made for all nonrespondents and nonsurveyed institutions. Over 92 percent sponded, including all of the 100 leading univ performance.

Several changes were made from prior re collected on an annual basis, beginning in cycle established between 1964 and 1972. Th research and development only and exclude in the sciences and engineering. Section departmental research. Total research and d first time in 1973 by field of science. Earlier field of science.

The following principal characteristics o in this report: Source of funds, distribution ar R&D activity (basic research, applied researc are group by highest degree granted, type of ranked by total and Federal R&D expenditure institutions. Separate data are summarized and Development Centers (FFRDC's) admini Also included are separate chapters dealin instruction and departmental research in the regarding scope, coverage, methods of estim are presented in the technical notes in appen

[4] See footnote 1, page vii.

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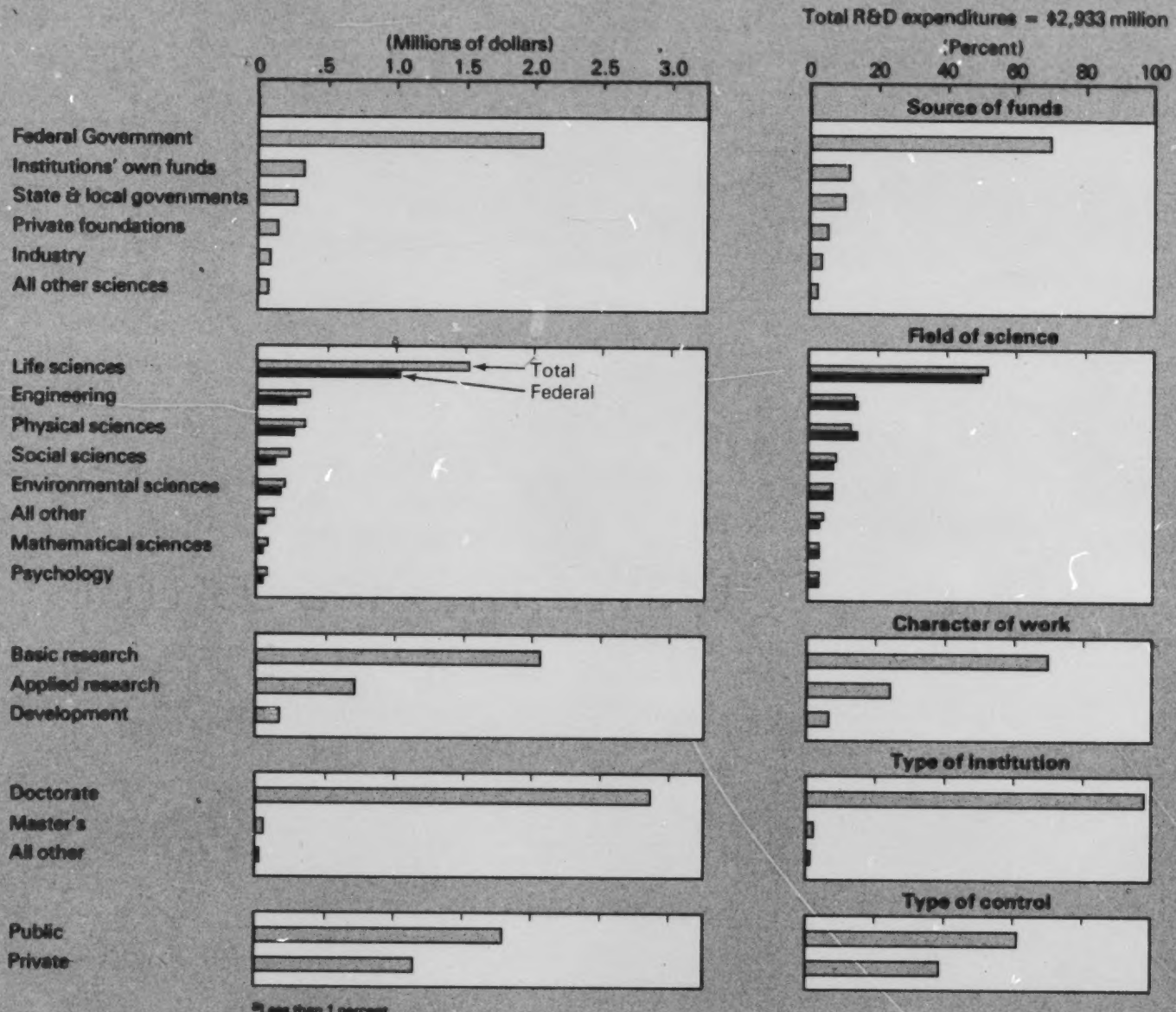
Several changes were made from prior reports. R&D expenditure data were collected on an annual basis, beginning in 1973, rather than on the biennial cycle established between 1964 and 1972. The data are for *separately budgeted* research and development only and exclude *departmental* research expenditures in the sciences and engineering. Section III deals with instruction and departmental research. Total research and *development* was collected for the first time in 1973 by field of science. Earlier studies only collected research by field of science.

The following principal characteristics of R&D expenditures are examined in this report: Source of funds; distribution among fields of science; and type of R&D activity (basic research, applied research, and development). Institutions are group by highest degree granted, type of control (public, private, etc.) and ranked by total and Federal R&D expenditure size, with subtotals for every ten institutions. Separate data are summarized for 23 Federally Funded Research and Development Centers (FFRDC's) administered by universities and colleges. Also included are separate chapters dealing with capital expenditures and instruction and departmental research in the sciences and engineering. Details regarding scope, coverage, methods of estimating, and limitations of the data are presented in the technical notes in appendix A.

Part I
UNIVERSITIES AND COLLEGES

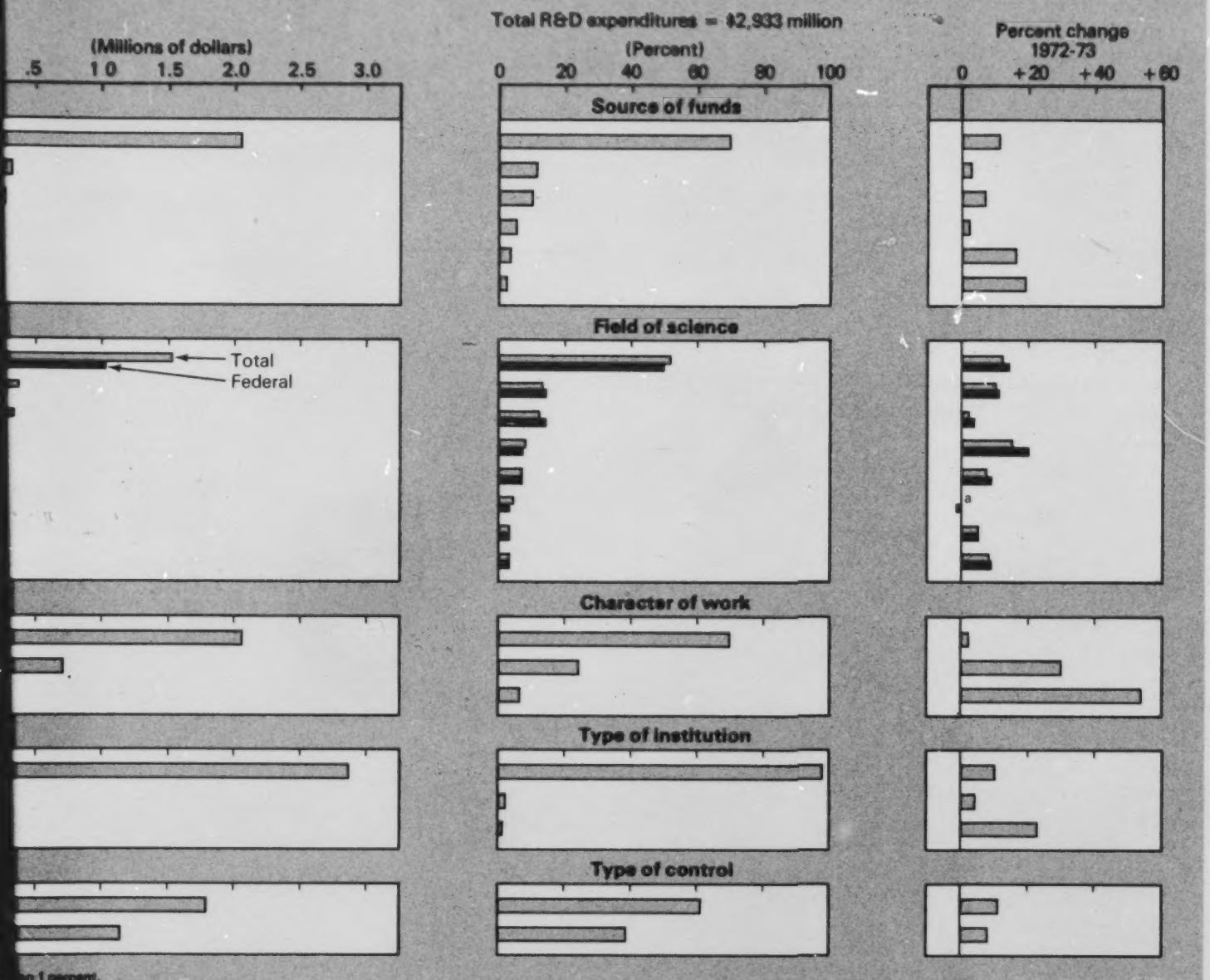
Characteristics of separately budgeted R&D expenditures in universities and colleges:



*Less than 1 percent.

SOURCE: National Science Foundation.

teristics of separately budgeted R&D expenditures in universities and colleges: FY 1973



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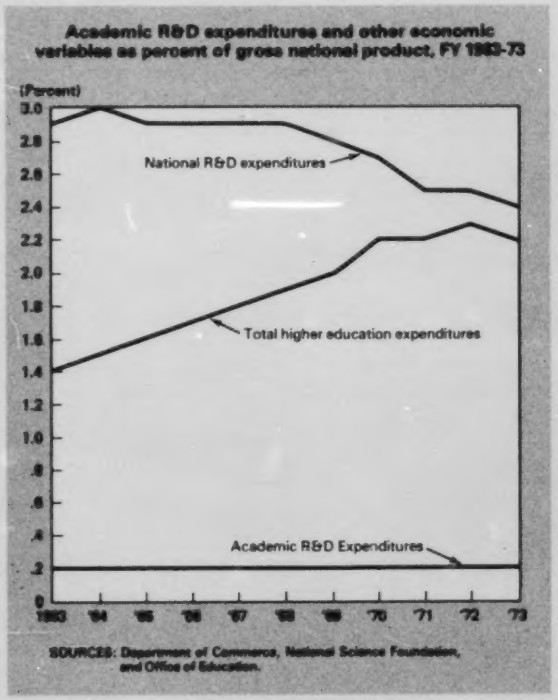
: National Science Foundation.

Section I. CURRENT R&D EXPENDITURES IN THE SCIENCES AND ENG

During 1972-73, R&D expenditures at universities and colleges increased 9.7 percent, while the average rate was 5.6 percent during 1968-72 and 13.9 percent during 1964-68. In 1973 academic R&D expenditures reached $2.9 billion — 10 percent over 1972. The impact of this increase over the average growth in prior years is somewhat dampened by the preliminary results of the 1974 survey which points to a sizable drop in the growth rate to 3 percent.[5] Basic research expenditures, which averaged 6-percent annual growth between 1970 and 1972, and 2 percent in 1973, show a 5-percent increase in 1974 to $2.1 billion. A significant factor in the small increase in total R&D expenditures for 1974, compared with basic research, was the separation of MIT's Draper Laboratory (primarily involved in development projects) from the academic sector into the independent nonprofit sector.

[5]Ibid



Over the last decade, several significant changes have occured in academic R&D patterns when viewed in a national perspective and compared with other economic variables:

- The academic sector's share of national R&D expenditures has increased from 7 percent to 10 percent.
- National R&D expenditures as a percent of the gross national product (GNP), declined from 3.2 percent in 1963 to 2.4 percent in 1973.
- Academic research as a percent of total higher education expenditures has also dropped from 13 percent to 10 percent.

Source of Funds

Current expenditures for research and development[6] in universities and colleges amounted to $2.9 billion or 10 percent of total R&D spending by all sectors of the economy in 1973, up 10 percent from 1972. From 1964 to 1973, R&D expenditures increased from $1.3 billion to $2.9 billion, or at an annual rate of 10 percent. When converted to constant 1967 dollars to discount inflation, however, annual R&D growth averaged only 6 percent.

[6]Here and throughout this report the expression research and development refers to separately budgeted R&D expenditures in the sciences and engineering. Departmental research amounting to an estimated $623 million in 1973 is analysed in section III as an integral part of the instructional programs of science and engineering departments.

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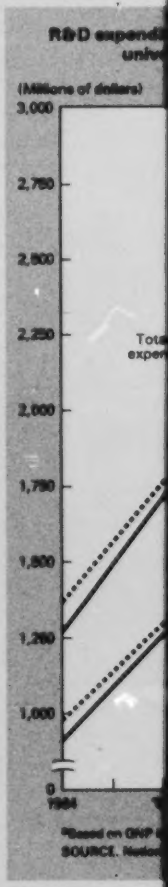

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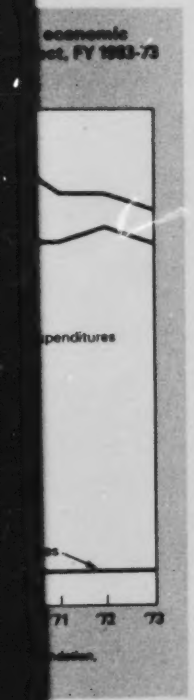

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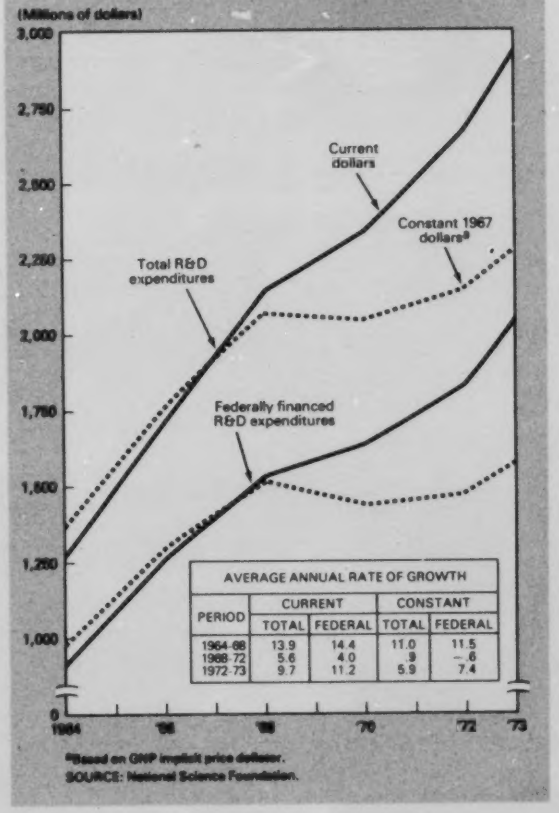
Variations in the level of Federal sponsorship was mainly responsible for the R&D growth patterns at universities and colleges in the 1964-73 period. The substantial growth of Federal funding (14 percent between 1964 and 1968), its subsequent curtailment (4-percent growth in the 1968-72 period) and its current recovery (11 percent from 1972 to 1973) account for most of the major fluctuations.

R&D expenditures in the sciences and engineering at universities and colleges, FY 1964-73



AVERAGE ANNUAL RATE OF GROWTH

PERIOD	CURRENT		CONSTANT	
	TOTAL	FEDERAL	TOTAL	FEDERAL
1964-68	13.9	14.4	11.0	11.5
1968-72	5.6	4.0	.9	— .6
1972-73	9.7	11.2	5.9	7.4

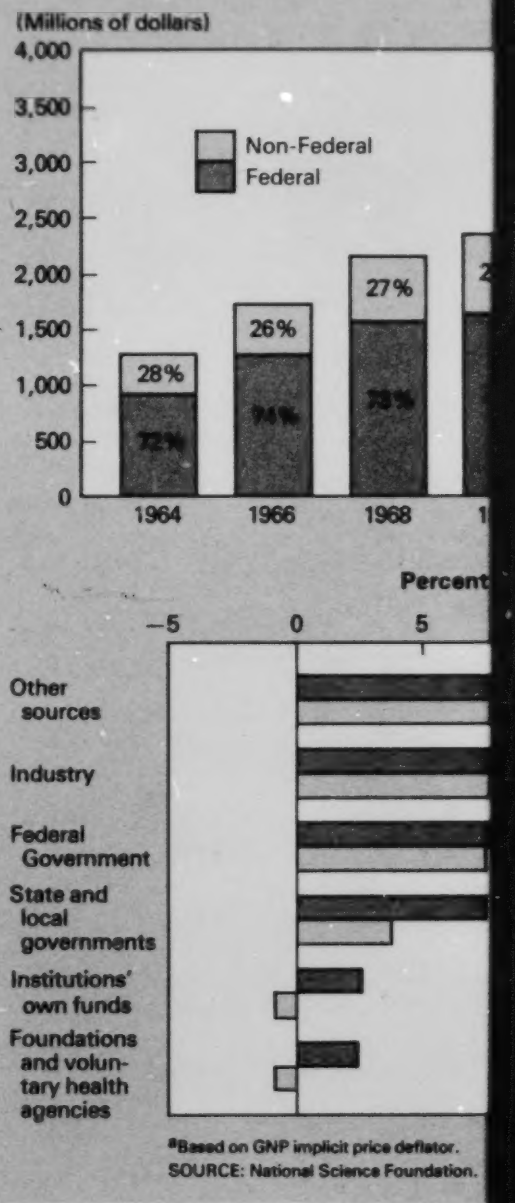
[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

20

In 1973 the Federal Government's share of R&D financing amounted to 70 percent of the total, down from a high of 74 percent in 1966. Non-Federal support, consisting primarily of institutions' own funds and State government support, increased in each period, but not enough to offset major fluctuations in Federal funding. From 1968 to 1972, non-Federal R&D funding recorded a 10-percent average growth — more than double the Federal rate.

In the 1972-73 period the increase in Federal R&D funding of 11 percent was significantly above the 6-percent increase reported from non-Federal sources. Adverse developments in the stock market and increasing operating costs have contributed to a substantially reduced growth in R&D support from private foundations, voluntary health agencies, and universities' own funds. R&D support from these sources increased 2 percent in the 1972-73 period, compared with annual rates of 8 percent and 13 percent, respectively, between 1970 and 1972. Industry and "other sources," including individuals and societies, together increased their rate of support 10 percent over 1970-72 levels. Annual growth in State government R&D support has dropped steadily from a high of 13 percent between 1968 and 1970 to 8 percent in the 1972-73 period.

R&D expenditures in the scienc
universities and colleges, by



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

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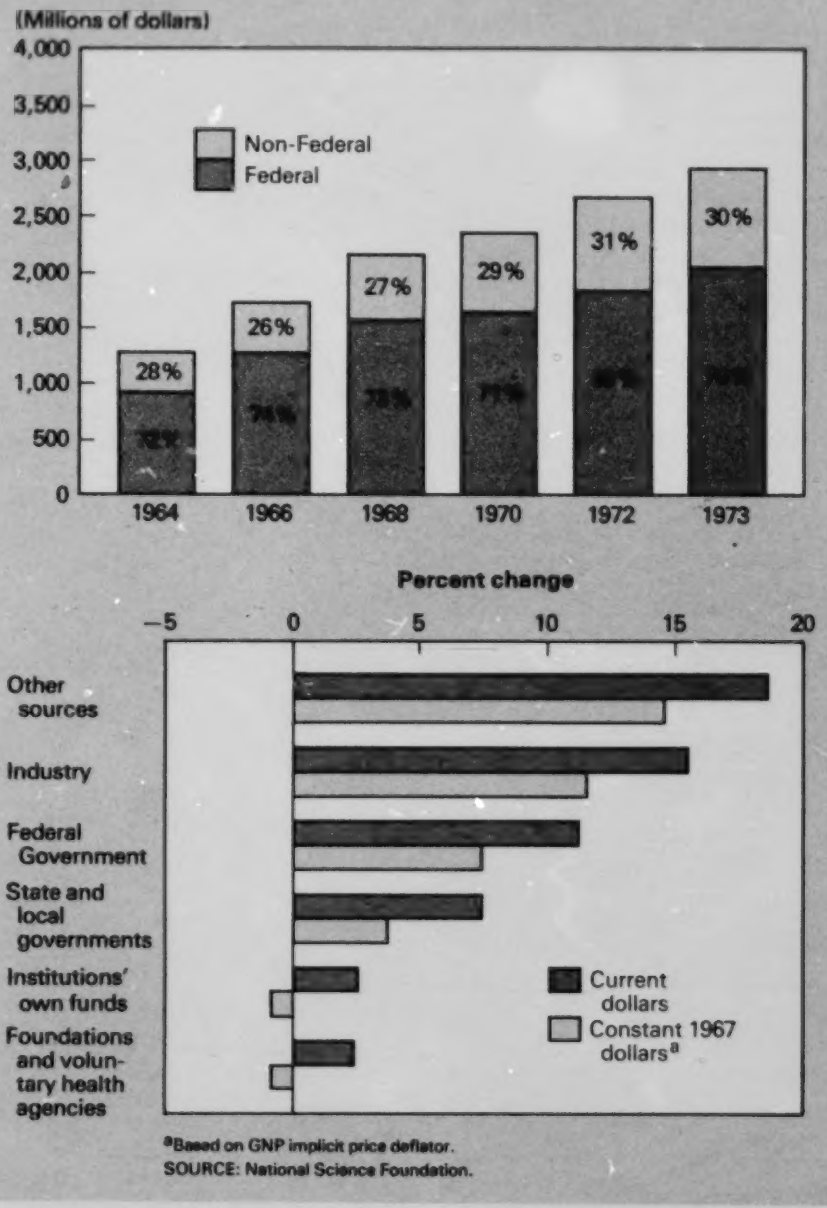
R&D expenditures in the sciences and engineering at universities and colleges, by source, FY 1964-73



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

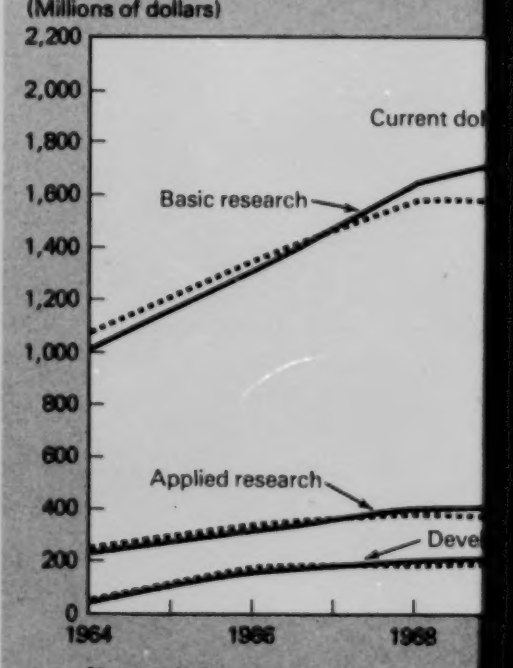
Type of R&D Activity

Universities and colleges are the largest performers of basic research in the economy, accounting for $2.1 billion, or 54 percent, of the U. S. total in 1973. Growth in basic research performance, however, has slowed considerably in recent years.[7] For example, between 1964 and 1968 university basic research expenditures expanded at a 13-percent annual rate; this growth dropped to 5 percent annually in the 1968-72 period and increased only 2 percent from 1972 to 1973. In constant 1967 dollars basic research *declined* nearly 2 percent in the 1972-73 period.

Applied research has shown a significant 30-percent annual growth for 1972-73. This sharp increase from the 8-percent annual rate established between 1968 and 1972 primarily reflects increased applied research in the environmental and life sciences and a shift in emphasis toward the practical application of available technology.

Development expenditures also increased dramatically between 1972 and 1973 — up 53 percent to $170 million. Nearly *one-fifth* of this amount was concentrated in the Charles Stark Draper Laboratory Division of the Massachusetts Institute of Technology.

Current R&D expenditures
engineering at universities and
of work, FY 1



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

[7] See technical notes for limitations associated with the collection of R&D expenditures by character of work.

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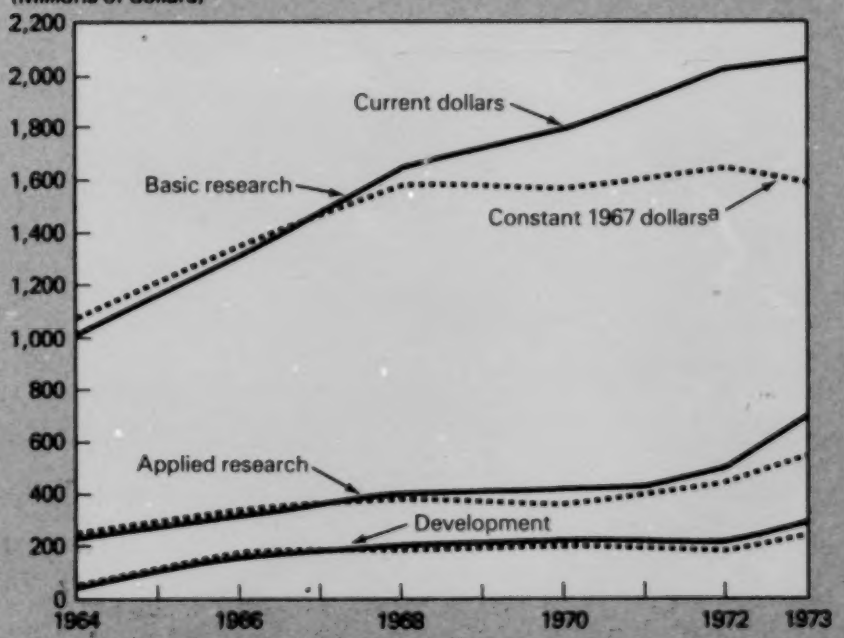
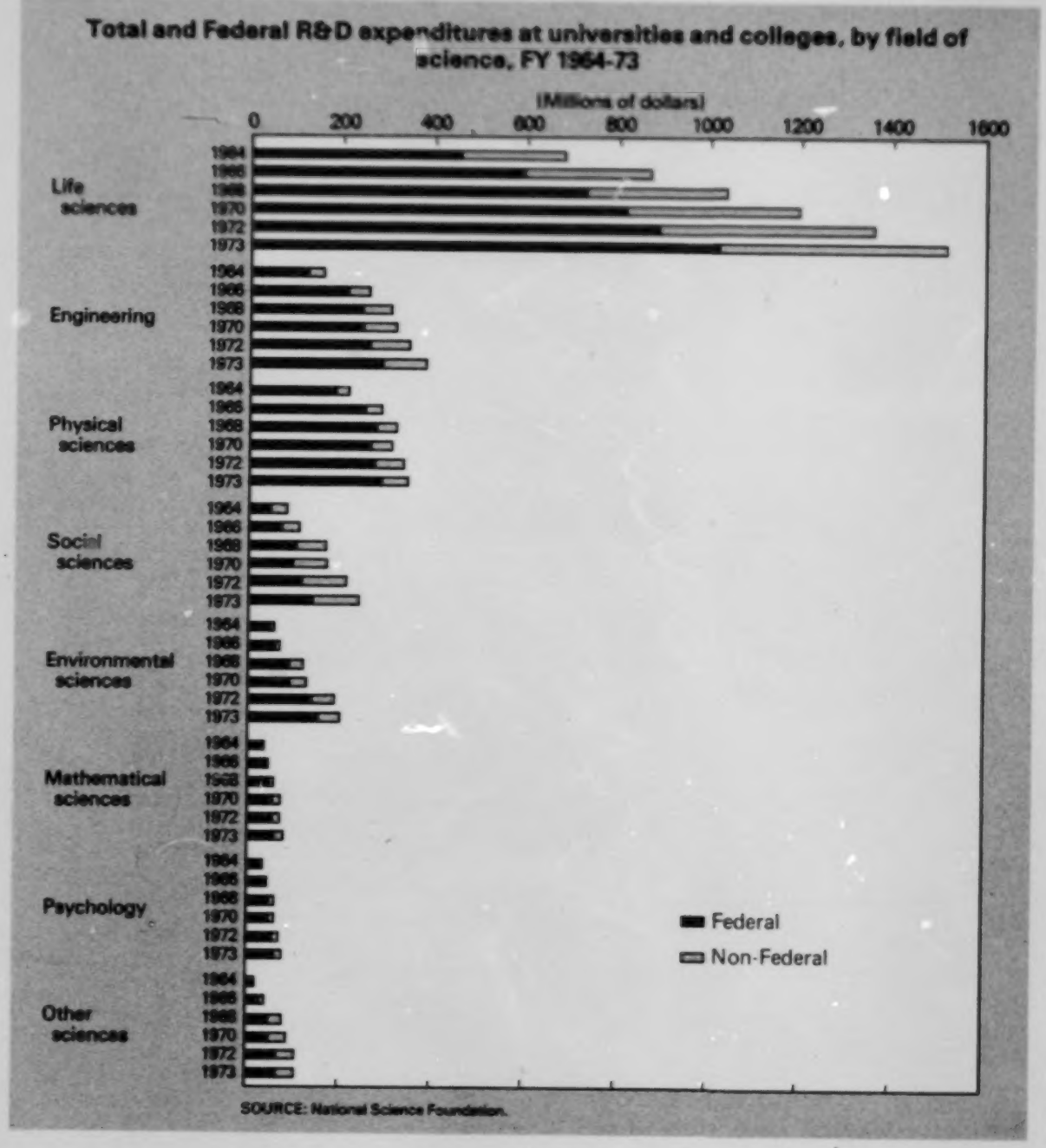
Current R&D expenditures in the sciences and engineering at universities and colleges, by character of work, FY 1964-73



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

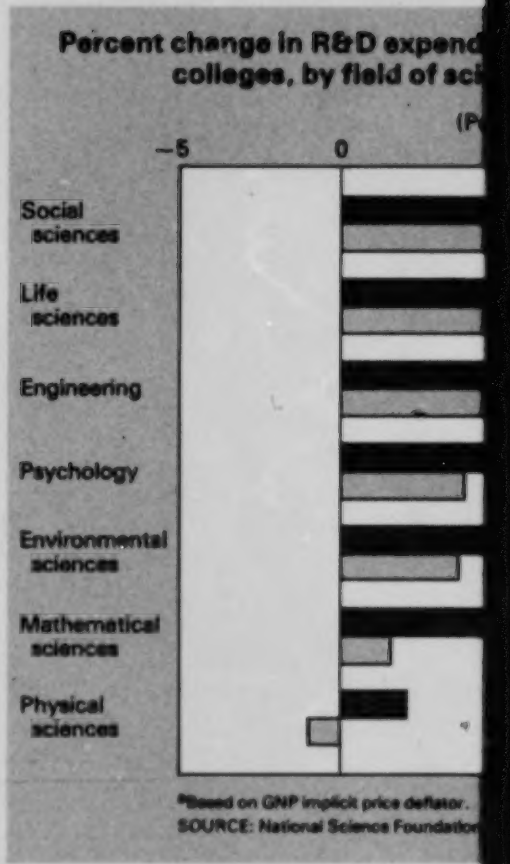

Total and Federal R&D expenditures at universities and colleges, by field of science, FY 1964-73
(Millions of dollars)
0
200
400
600
800
1000
1200
1400
1600
Life sciences
Engineering
Physical sciences
Social sciences
Environmental sciences
Mathematical sciences
Psychology
Other sciences
1964
1966
1968
1970
1972
1973
Federal
Non-Federal
SOURCE: National Science Foundation.

6

Field of Science

Another significant aspect of academic R&D expenditures is their heavy orientation toward the life sciences, which accounted for 52 percent of such expenditures in 1973. The Federal Government's share of academic R&D expenditures in the life sciences ranged from a high of 70 percent in 1968 to a low of 66 percent in 1972. Ranking next in terms of volume of expenditures was engineering with 14 percent. Federal support was most heavily concentrated in in the physical sciences, accounting for 82 percent of the total.

Although total R&D expenditures in universities and colleges increased 10 percent from 1972 to 1973 in terms of current dollars, this rate of growth varied significantly among fields of science. The social sciences experienced the largest increase, 15 percent, over seven times the 2-percent growth recorded by the physical sciences. The life sciences ranked second with a 12-percent annual growth, followed by a 10-percent growth in engineering. In constant 1967 dollars the social sciences actually increased 10 percent, compared with a 1-percent decline in the physical sciences.



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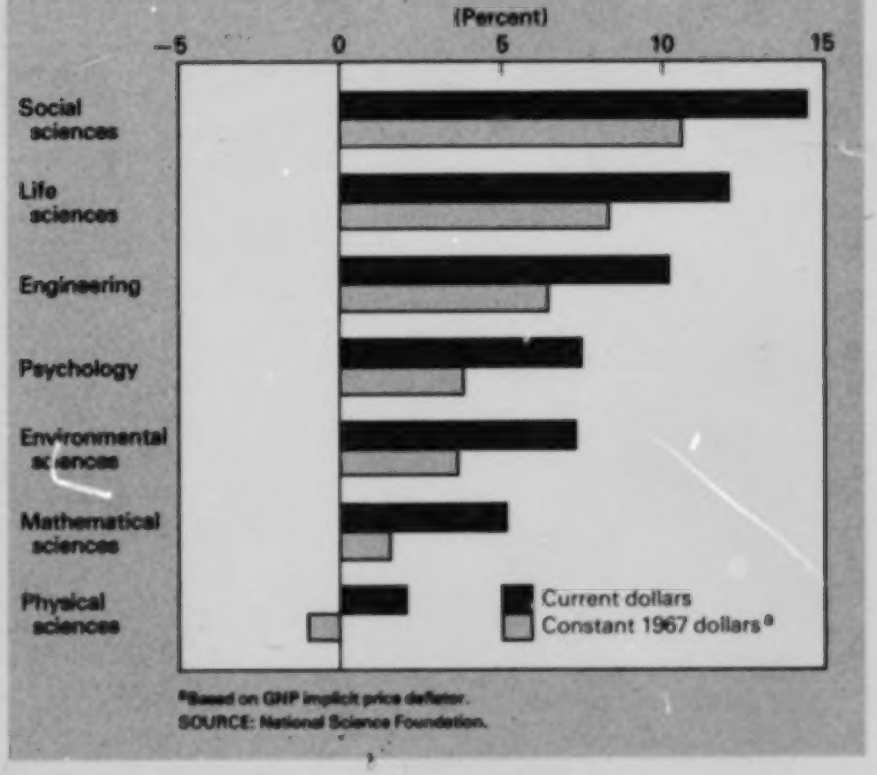
Percent change in R&D expenditures at universities and colleges, by field of science, FY 1972-73



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

Within the life sciences, biological research (including agriculture) had a 13-percent annual growth rate between 1970 and 1973 compared to a 5-percent increase in the clinical medical sciences. Biology, therefore, increased in its share of life science R&D expenditures from 46 percent in 1970 to 53 percent in 1973. Non-Federal sources of medical R&D expenditures increased 10 percent per year between 1970 and 1973, while a 14-percent R&D growth rate of non-Federal funding occurred in the biological sciences.

Another significant change since 1964 has been the substantial increase in social science R&D expenditures. From 1964 to 1968 research and development in the social sciences increased 20 percent per year. Declines in other social science research, and also in political sciences, resulted in near-zero growth between 1968 and 1970. Since 1970, however, sharp increases in other social science research, sociology and political science, have led to an 11-percent growth from 1970 to 1972 and a 15-percent growth from 1972 to 1973.

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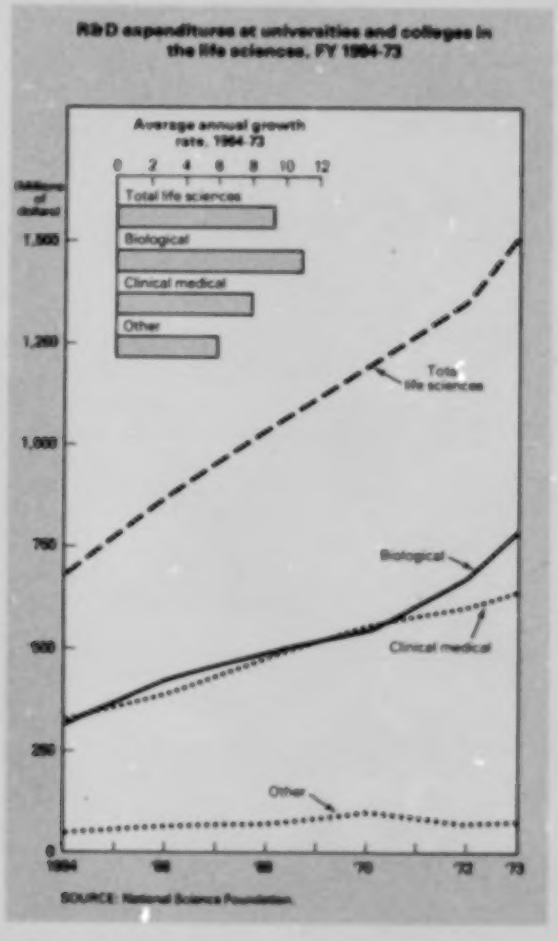

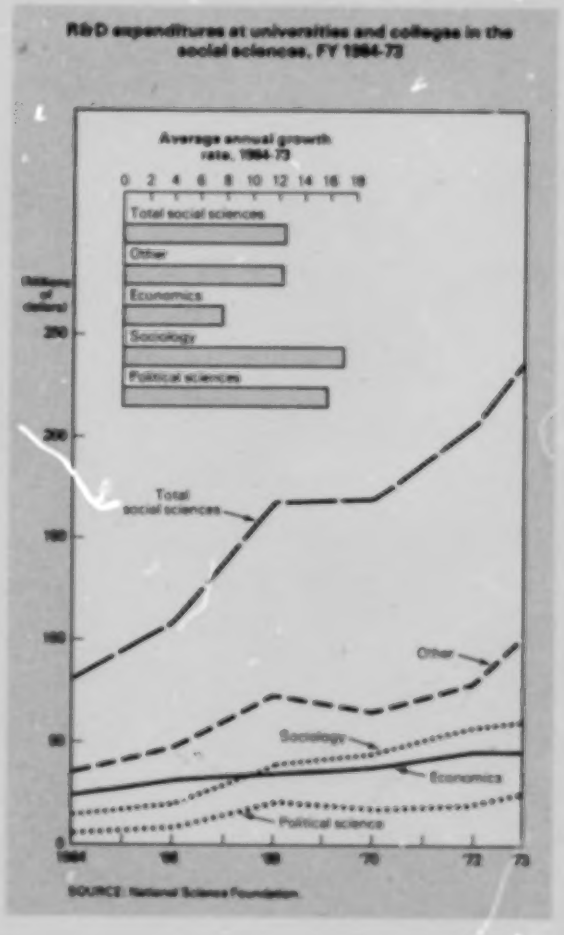

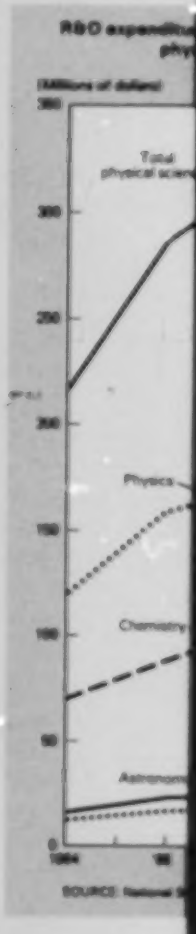

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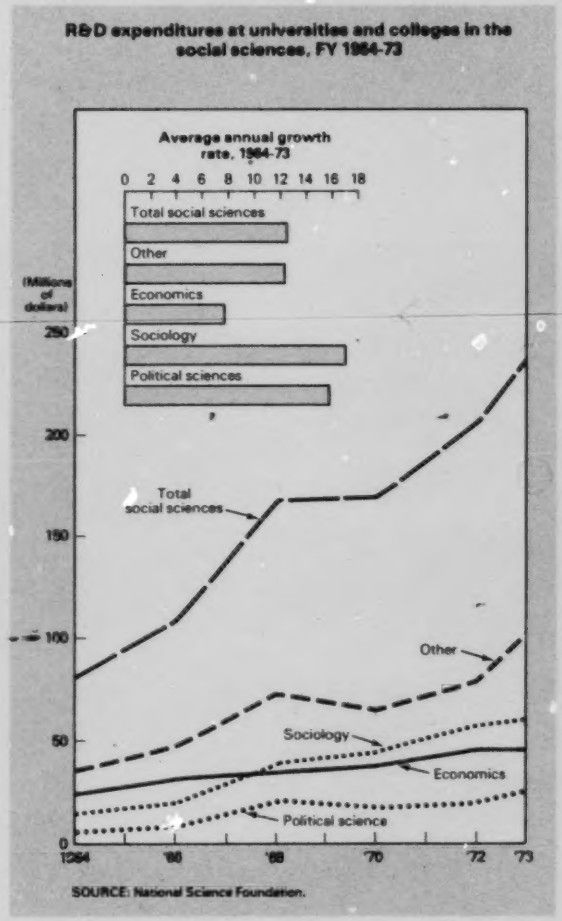
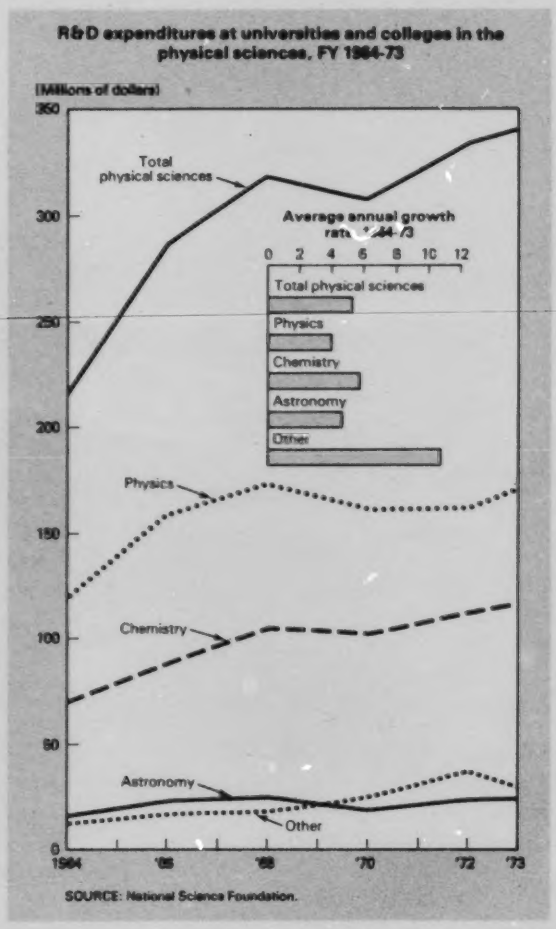
Research and development in the physical sciences increased 5 percent annually in the 1964-73 period — the lowest rate of any major science field. In constant 1967 dollars, the amount of physical science research performed in 1973 was less than 1966 levels. Physics grew 4 percent annually from 1964 to 1973, or 0.4 percent in constant 1967 dollars. Only "other physical sciences," consisting mainly of multidisciplinary research, grew at a rate comparable to the 11-percent average growth of all R&D expenditures in the academic sector.





Type of Control

Publicly controlled universities and colleges accounted for 61 percent of total R&D expenditures in the academic sector in 1973, an amount slightly over their 58-percent share in 1968. R&D expenditures reported by public institutions increased 8 percent annually, more than double the 4-percent annual growth for private institutions, during this 5-year period. In constant 1967 dollars public institutions increased their R&D programs 3 percent annually, while private institutions recorded a 0.4-percent decline. This increased growth and concentration of R&D activities in public institutions primarily reflects the influence of large State universities, 65 of which are among the top 100 institutions in the country in terms of R&D expenditures.

The Federal Government supplied 79 percent of the R&D funds used by private institutions, compared with 64 percent for institutions under public control. Federal R&D expenditures in private institutions increased 10 percent in the 1972-73 period, compared with a 12-percent increase in public institutions.

Type of Institution

Since doctorate-granting institutions accounted for 98 percent of all academic R&D expenditures, the distribution of these expenditures by source of funds or field of science is almost identical to that of all institutions. The dominant feature of the distributional pattern between the master's and bachelor's-level institutions is as follows:

- The federally financed share of R&D expenditures amounted to 80 percent in bachelor's-

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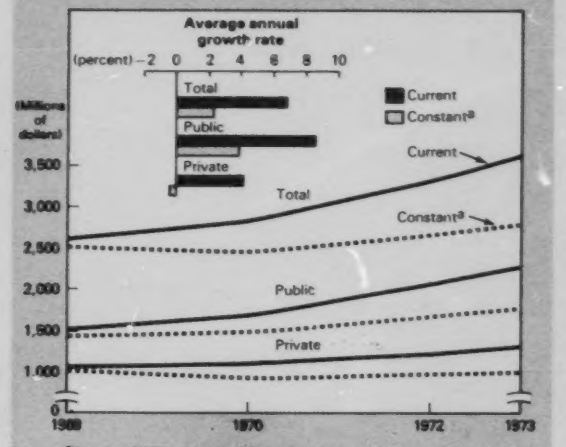
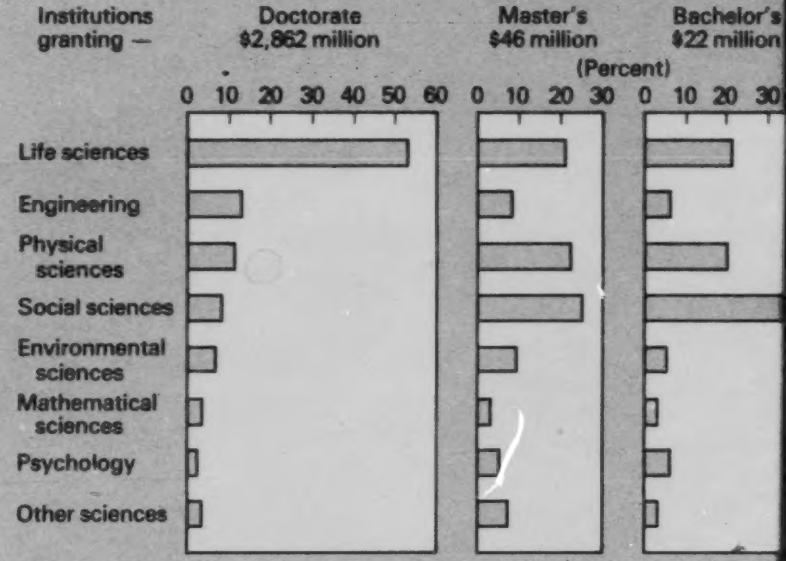
R&D expenditures in the sciences and engineering at public and private universities and colleges, FY 1968-73



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

Current R&D expenditures at universities and colleges, type of institution, FY 1973



SOURCE: National Science Foundation.

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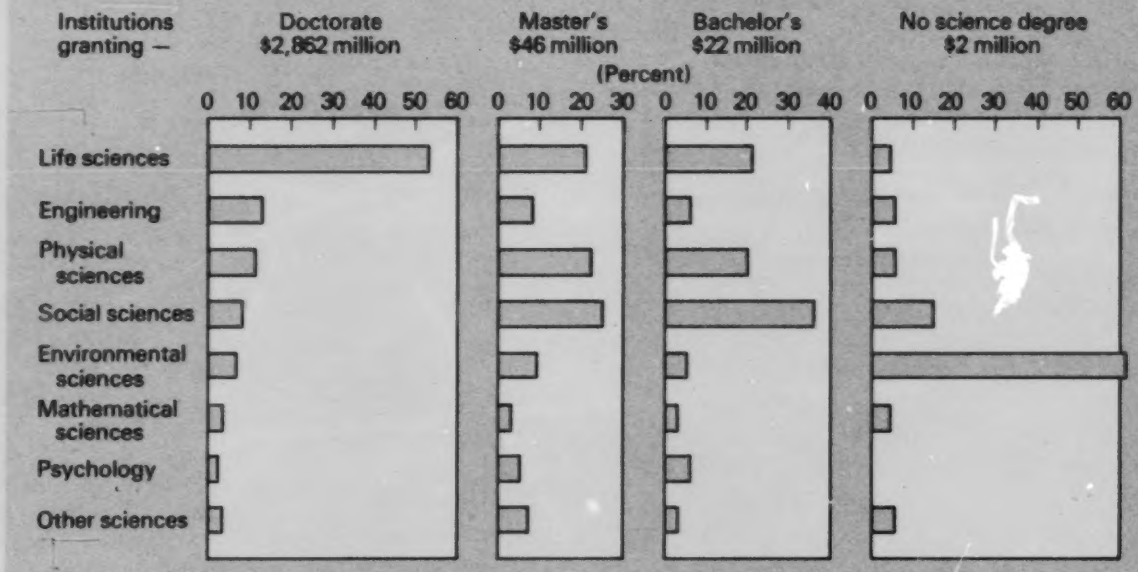
- The federally financed share of R&D expenditures amounted to 80 percent in bachelor's-granting institutions and 65 percent in master's-granting institutions.
- Life sciences accounted for less than 25 percent of total R&D expenditures in nondoctorate-granting institutions since medical schools are associated with doctorate-granting institutions.
- The social sciences account for the largest share of R&D expenditures in both master's and bachelor's-granting institutions, followed closely by the physical and life sciences.
- Institutions not granting science degrees allocated three-fifths of their R&D expenditures to the environmental sciences. Virtually all of this environmental research is performed at Wentworth Institute under a contract with the Air Force involving the design of rocket systems to measure atmospheric conditions.

Current R&D expenditures at universities and colleges, by field of science and type of institution, FY 1973



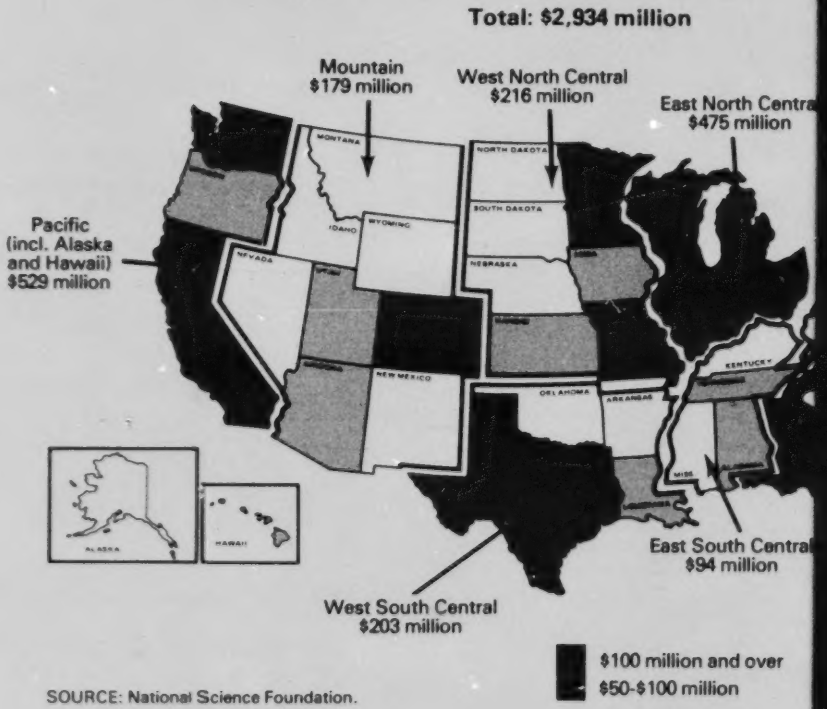
SOURCE: National Science Foundation.

Geographic Distribution

Institutions in the Middle Atlantic States allocated more money — $531 million — to research and development than did those in other geographic divisions. The Pacific States ranked second with $529 million and experienced the most rapid growth rate of any division from 1966 to 1973. Since 1966 the Pacific States have grown at an annual rate of over 10 percent. In contrast, the Middle Atlantic States have grown at the slowest rate during this period — 6 percent. The East South Central States, however, led the Nation with a 20-percent growth in R&D activities in the 1972-73 period. The following tabulation shows the percent change for this period for all divisions:

Division	Percent change 1972-73
East South Central	19.7
Pacific	14.7
South Atlantic	11.9
East North Central	11.1
West South Central	10.8
Middle Atlantic	10.1
Mountain	9.8
New England	3.9
West North Central	−1.8

Geographic distribution of total R&D expenditures in engineering at universities and colleges: F



SOURCE: National Science Foundation.

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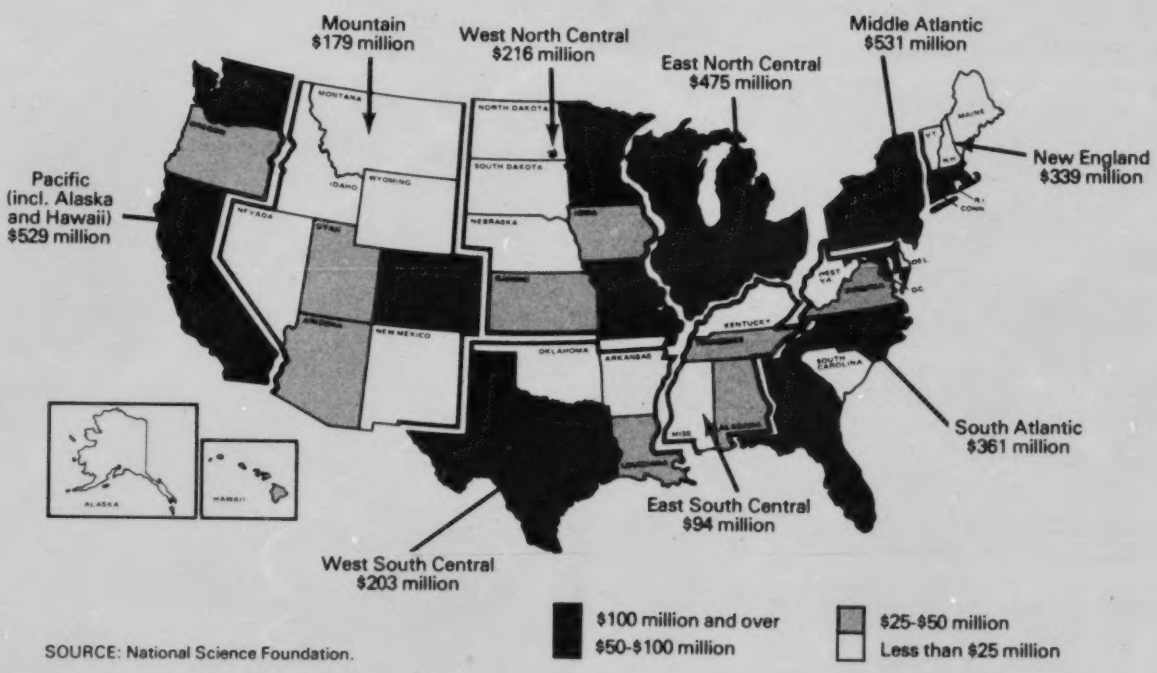
Geographic distribution of total R&D expenditures in the sciences and engineering at universities and colleges: FY 1973

Total: $2,934 million



SOURCE: National Science Foundation.

The 10 leading States in terms of academic R&D performance in the sciences and engineering accounted for three-fifths of all R&D activity in the academic sector. This proportion has remained relatively constant since 1964, but there were significant changes among the leading States. Since 1970, California, the leading State, substantially increased its share of total while Pennsylvania, Massachusetts, and Ohio declined in relative importance. Institutions in North Carolina reported the largest increases of any of the leading States from 1972 to 1973, with 24 percent.

Distribution of total R&D expenditures in the sciences and engineering at universities and colleges in 10 leading States: FY 1964-73

[Dollars in millions]

State	1964	1966	1968	1970	1972	1973	1972-73 percent change
Total, all States	$1,275	$1,715	$2,149	$2,335	$2,675	$2,934	9.7
	Percent distribution						
California	11.4	11.6	11.5	10.5	12.2	13.0	17.0
New York	11.7	12.1	12.4	11.7	11.4	11.9	14.1
Massachusetts	8.0	8.9	8.7	8.7	8.7	8.4	5.3
Texas	3.4	3.7	4.1	4.4	4.7	4.7	10.7
Pennsylvania	5.6	5.5	5.8	5.6	4.9	4.5	1.7
Illinois	6.1	5.4	5.1	4.5	4.6	4.5	7.7
Michigan	4.1	4.1	3.6	3.7	3.7	3.8	14.4
Wisconsin	2.8	3.1	3.2	3.3	3.1	3.3	16.7
North Carolina	2.1	2.3	2.6	2.5	2.4	2.7	24.3
Ohio	3.1	3.0	3.2	3.1	2.7	2.6	5.9
All other States[1]	41.8	40.4	39.9	42.0	41.7	40.6	6.7

[1]Includes outlying areas and offices abroad.

Concentration of R&D Expenditur

Academic research and development is hea
institutions. In 1973 R&D expenditures in these
over 1972 and accounted for 83 percent of both
in the academic sector. Between 1966 and 197
increased their proportion of total R&D expe
percent. Since 1970 this proportion has declined
percent were reported by 63 institutions, while 2
greater than 20 percent; another 17 institut
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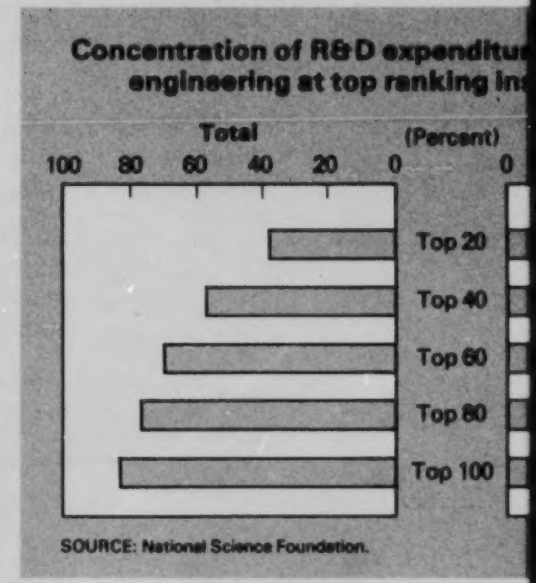
was 9 percent.



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sciences and engineering at universities and colleges
States: FY 1964-73

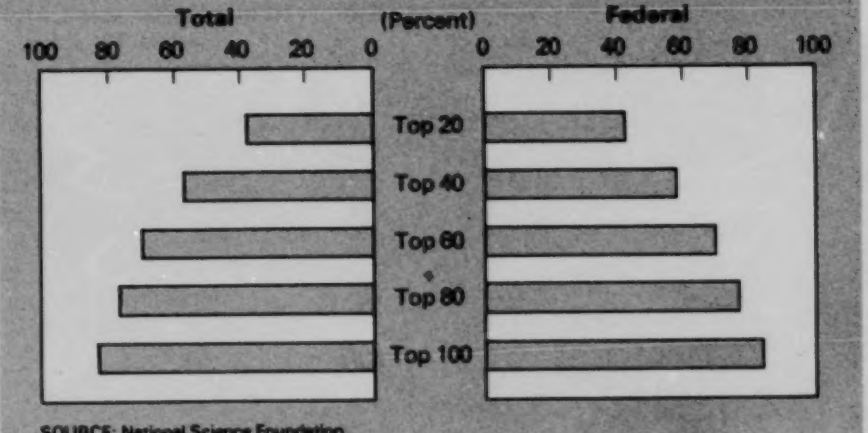
ars in millions]

	1968	1970	1972	1973	1972-73 percent change
	$2,149	$2,335	$2,675	$2,934	9.7
Percent distribution					
	11.5	10.5	12.2	13.0	17.0
	12.4	11.7	11.4	11.9	14.1
	8.7	8.7	8.7	8.4	5.3
	4.1	4.4	4.7	4.7	10.7
	5.8	5.6	4.9	4.5	1.7
	5.1	4.5	4.6	4.5	7.7
	3.6	3.7	3.7	3.8	14.4
	3.2	3.3	3.1	3.3	16.7
	2.6	2.5	2.4	2.7	24.3
	3.2	3.1	2.7	2.6	5.9
	39.9	42.0	41.7	40.6	6.7

Concentration of R&D Expenditures

Academic research and development is heavily concentrated in 100 leading institutions. In 1973 R&D expenditures in these institutions increased 10 percent over 1972 and accounted for 83 percent of both total and Federal R&D funding in the academic sector. Between 1966 and 1970 these 100 leading institutions increased their proportion of total R&D expenditures from 87 percent to 90 percent. Since 1970 this proportion has declined steadily. Growth rates up to 20 percent were reported by 63 institutions, while 20 institutions reported increases greater than 20 percent; another 17 institutions reported declines in R&D expenditures. The median percent change for the 100 largest R&D performers was 9 percent.

Concentration of R&D expenditures in the sciences and engineering at top ranking institutions, FY 1973



SOURCE: National Science Foundation.

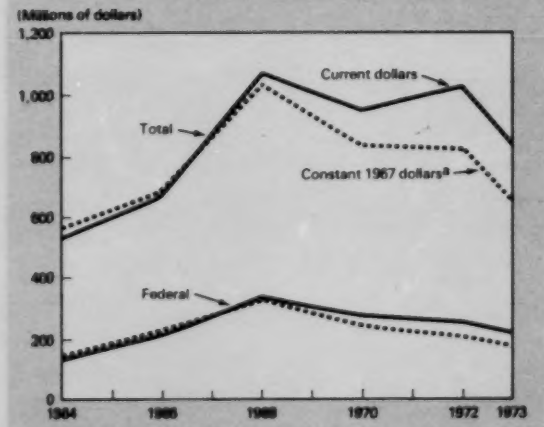
Section II. CAPITAL EXPENDITURES FOR RESEARCH, DEVELOPMENT AND INSTRUCTION IN THE SCIENCES AND ENGINEERING

The expansion in enrollment in the sciences and engineering in the early sixties and the greatly increased scale and complexity of scientific activities during the past decade resulted in relatively large outlays for facilities and equipment by academic institutions between 1964 and 1968. Since 1968, however, reduced Federal support, increasing interest rates, and a leveling off in enrollments has resulted in sharp reductions in expenditures for facilities and equipment. Capital expenditures for scientific activities at universities and colleges totaled $846 million in 1973, far below the $1.1 billion spent in 1968. In constant 1967 dollars the 1973 expenditure level was nearly $400 million below the capital acquisitions reported in 1968.

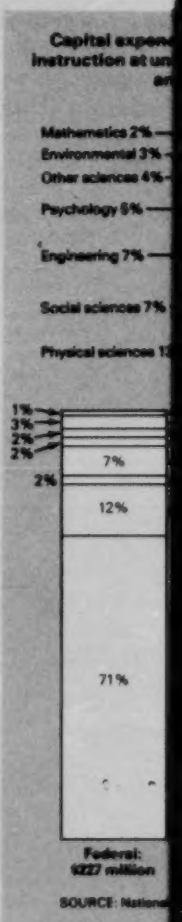
Universities and colleges rely principally upon their own resources for the financing of facilities and equipment in the sciences and engineering. This is especially true during 1968-73, as Federal support declined nearly 8 percent annually. In 1973 non-Federal support accounts for 73 percent of capital funding.

The distribution of capital expenditures by broad field of science was similar to that of current expenditures. The life sciences accounted for 58 percent of the total in 1973 — up substantially over the 44-percent share reported in 1964. In contrast, engineering dropped from 14 percent of the total in 1964 to 7 percent in 1973. Federal support is also becoming increasingly concentrated in the life sciences — up from 61 percent in 1964 to 71 percent in 1973 — with the remaining Federal funds primarily in the physical sciences and engineering.

Capital expenditures for research, development, and instruction in the sciences and engineering at universities and colleges, FY 1964-73



[a]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.



TAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND RUCTION IN THE SCIENCES AND ENGINEERING

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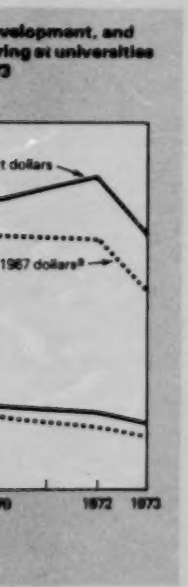
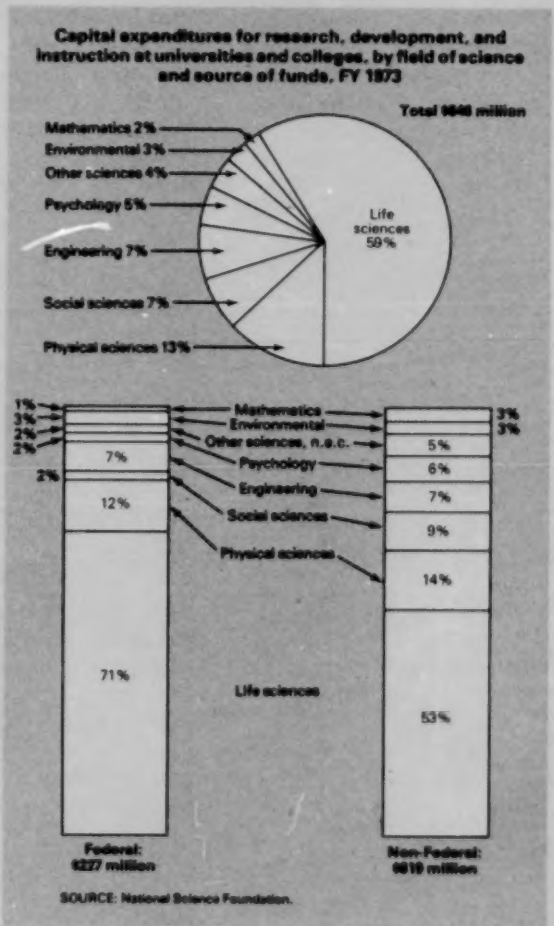


and colleges totaled $846 million in 1973, far below the $1.1 billion spent in 1968. In constant 1967 dollars the 1973 expenditure level was nearly $400 million below the capital acquisitions reported in 1968.

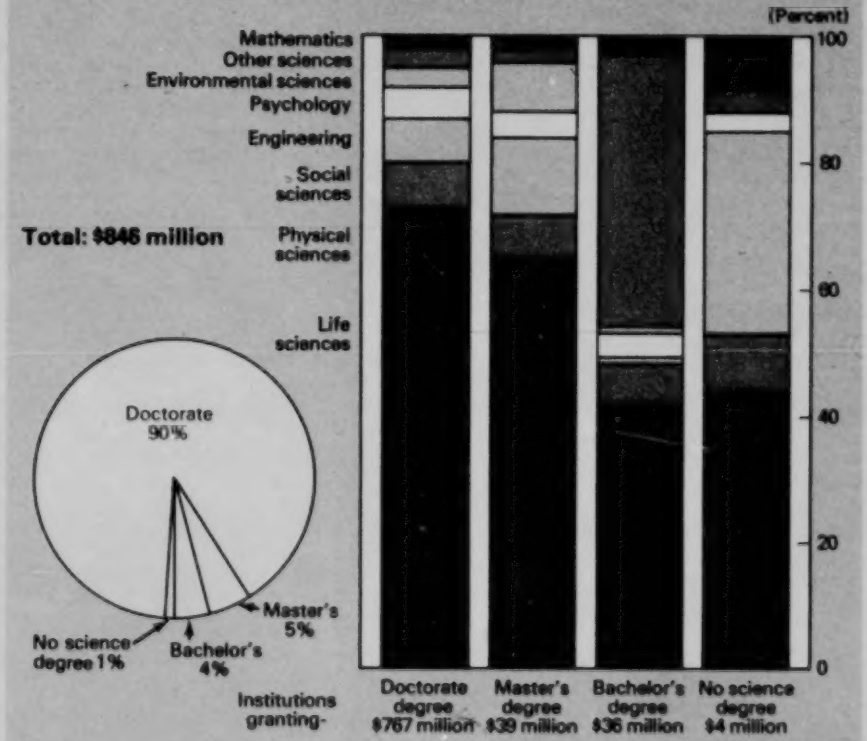
Universities and colleges rely principally upon their own resources for the financing of facilities and equipment in the sciences and engineering. This is especially true during 1968-73, as Federal support declined nearly 8 percent annually. In 1973 non-Federal support accounts for 73 percent of capital funding.

The distribution of capital expenditures by broad field of science was similar to that of current expenditures. The life sciences accounted for 58 percent of the total in 1973 — up substantially over the 44-percent share reported in 1964. In contrast, engineering dropped from 14 percent of the total in 1964 to 7 percent in 1973. Federal support is also becoming increasingly concentrated in the life sciences — up from 61 percent in 1964 to 71 percent in 1973 — with the remaining Federal funds primarily in the physical sciences and engineering.



Similarly, capital expenditures of doctorate-granting institutions, with affiliated health science centers and agricultural experiment stations, were concentrated in the life sciences (61 percent of the total). In master's and bachelor's-granting institutions, the largest shares of capital expenditures were also in the life sciences — 34 percent and 38 percent, respectively.

Capital expenditures for research, development, and instruction at universities and colleges, by type of institution and field of science, FY 1973



SOURCE: National Science Foundation.

The 10 leading States in terms of capital
percent of all such funding in 1973. New Yor
two-thirds of this amount was in the life scie
with $72 million, showed a more even distr
between life, physical and social sciences.

The proportion of total capital expendit
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**Capital expenditures for researc
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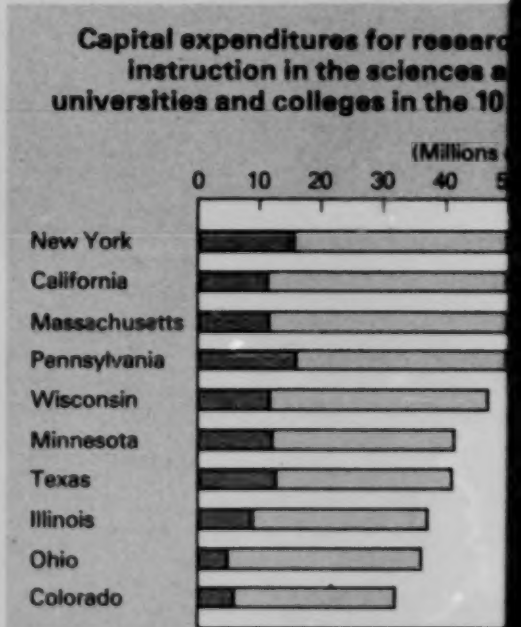
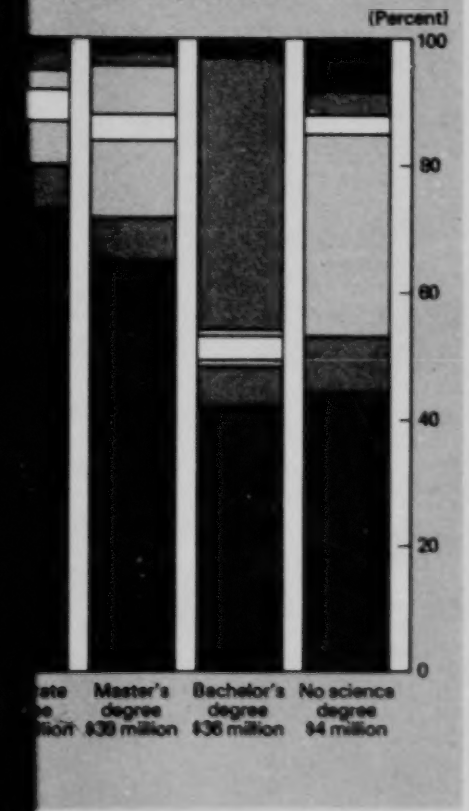


SOURCE: National Science Foundation

of doctorate-granting institutions, with agricultural experiment stations, were percent of the total). In master's and gest shares of capital expenditures were nd 38 percent, respectively.

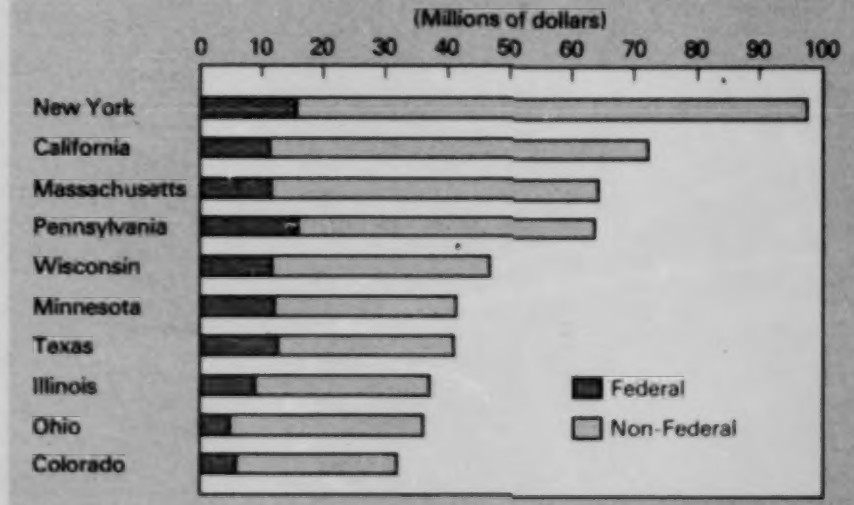
search, development, and and colleges, by type of of science, FY 1973



The 10 leading States in terms of capital expenditures accounted for 63 percent of all such funding in 1973. New York ranked first with $97 million; two-thirds of this amount was in the life sciences. California, ranking second with $72 million, showed a more even distribution of capital expenditures between life, physical and social sciences.

The proportion of total capital expenditures sponsored by the Federal Government within these 10 States varied from a high of 30 percent in Texas to a low of 13 percent in Ohio. These 10 States combined accounted for 48 percent of all federally financed capital expenditures.

Capital expenditures for research, development, and instruction in the sciences and engineering in universities and colleges in the 10 leading States, FY 1973



SOURCE: National Science Foundation.

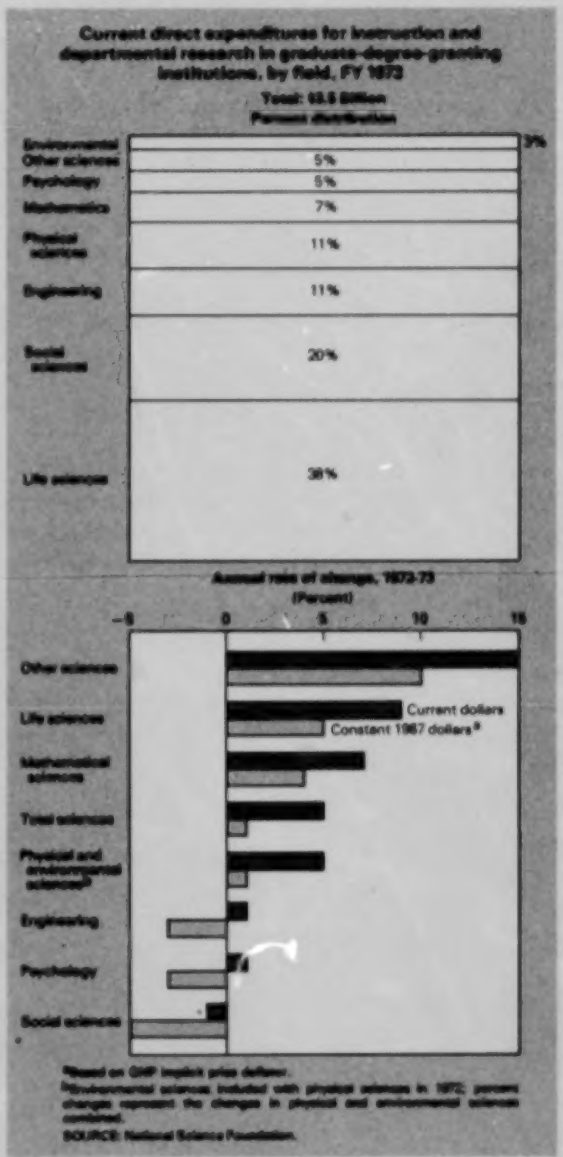
Section III. CURRENT DIRECT EXPENDITURES FOR INSTRUCTION AN DEPARTMENTAL RESEARCH IN GRADUATE-DEGREE-GRA INSTITUTIONS IN THE SCIENCES AND ENGINEERING

The largest single component of the scientific and engineering expenditures of universities and colleges was the amount allocated to instruction and departmental research. Current direct expenditures for such purposes in graduate-degree-granting institutions in the sciences totaled $3.5 billion in 1973. This represents a 5-percent increase over the $3.3 billion expended by these institutions in 1972. (See survey Instructions, p. 109, Sec. B, for definitions of this section.)

In 1973 nearly two-fifths of all expenditures for instruction and departmental research were allocated to the life sciences. This reflects the influence of medical schools and schools of agriculture at doctorate-granting institutions. Between 1972 and 1973 instructional and departmental research programs in the life sciences increased 9 percent, the largest funding increase of any science field. "Other sciences" showed the largest percentage increase (15 percent), however, these programs only accounted for 4 percent of the total. Engineering and psychology each showed only a 1-percent increase, while social sciences declined 1 percent.

Direct costs for departmental research in graduate-degree-granting institutions amounted to an estimated $434 million in 1973, down 3 percent from the $447 million estimated in 1972. Departmental research as a percent of instruction and departmental research declined from 14 percent of the 1972 total to 12 percent of the 1973 total. In 1973 the relative distribution by field of science was fairly close with a high of 14 percent in life sciences and a low of 9 percent in "other sciences."

The data on departmental research are subject to serious limitations. For example, imputation rates for departmental research by field of science ranged from 35 percent to 45 percent of the total



in 1973. Many estimate expen because they e research," indic faculty time is s and research ar tions consider central account distribution of and nonsepar appendix A fo rates.

Current direct e research in gradua and eng

Field of science
Total
Engineering
Physical sciences
Environmental sciences
Mathematical sciences
Life sciences
Psychological sciences
Social sciences
Other sciences

[1]Departmental resea instructional respond
[2]Environmental scie percent changes repo sciences combined

ENT DIRECT EXPENDITURES FOR INSTRUCTION AND RTMENTAL RESEARCH IN GRADUATE-DEGREE-GRANTING UTIONS IN THE SCIENCES AND ENGINEERING

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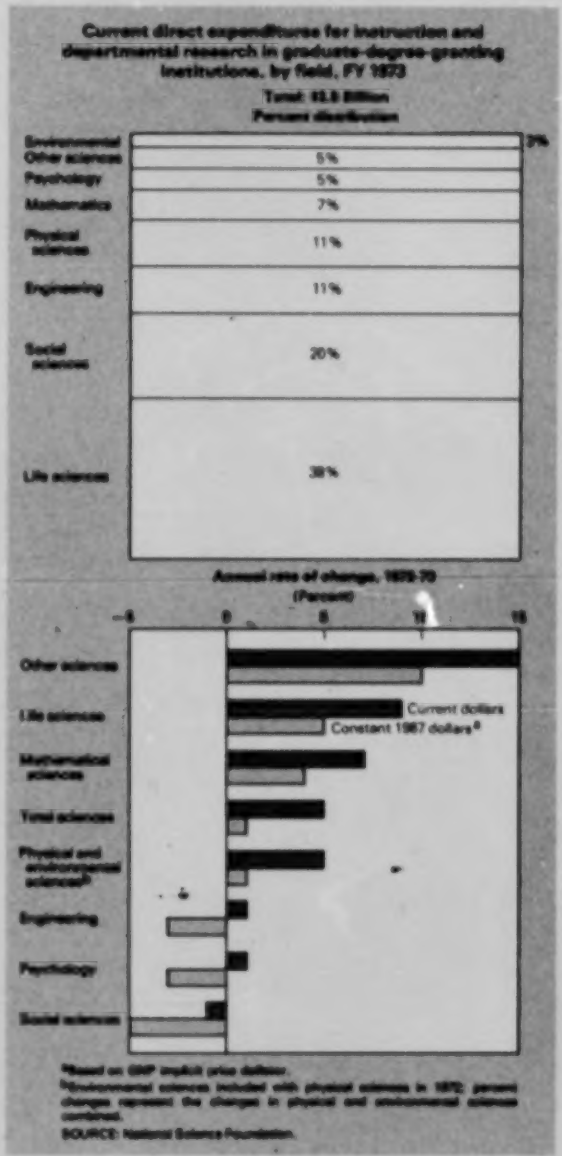


in 1973. Many institutions were not able to estimate expenditures for departmental research because they employ the concept of "teaching-research," indicating that a substantial amount of faculty time is spent in activities in which teaching and research are inseparably linked. These institutions consider it impossible or impractical for a central accounting office to determine the proper distribution of faculty salaries between teaching and nonseparately budgeted research. See appendix A for further details and imputation rates.

Current direct expenditures for instruction and departmental research in graduate-degree-granting institutions in the sciences and engineering: fiscal years 1972 and 1973

[Dollars in millions]

Field of science	Total instruction and departmental research			Estimated departmental research as percent of total instruction and departmental research[1]	
	1973	1972	Percent change 1972-73	1973	1972
Total	$3,499	$3,327	5.2	12.4	13.5
Engineering	395	389	1.4	10.9	11.4
Physical sciences	382	461	[2]4.5	12.6	14.8
Environmental sciences	100	(2)	(2)	13.8	(2)
Mathematical sciences	254	236	7.4	10.8	9.9
Life sciences	1,336	1,221	9.4	14.3	15.9
Psychological sciences	165	164	1.0	10.4	10.9
Social sciences	713	720	−1.0	11.0	12.0
Other sciences	155	135	14.8	9.4	9.4

[1]Departmental research data are based on rough estimates provided by instructional respondents.

[2]Environmental sciences included with physical sciences in 1972; percent changes represent the changes in physical and environmental sciences combined.

Part II

FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS ADMINISTERED BY UNIVERSITIES AND UNIVERSITY CONSORTIA

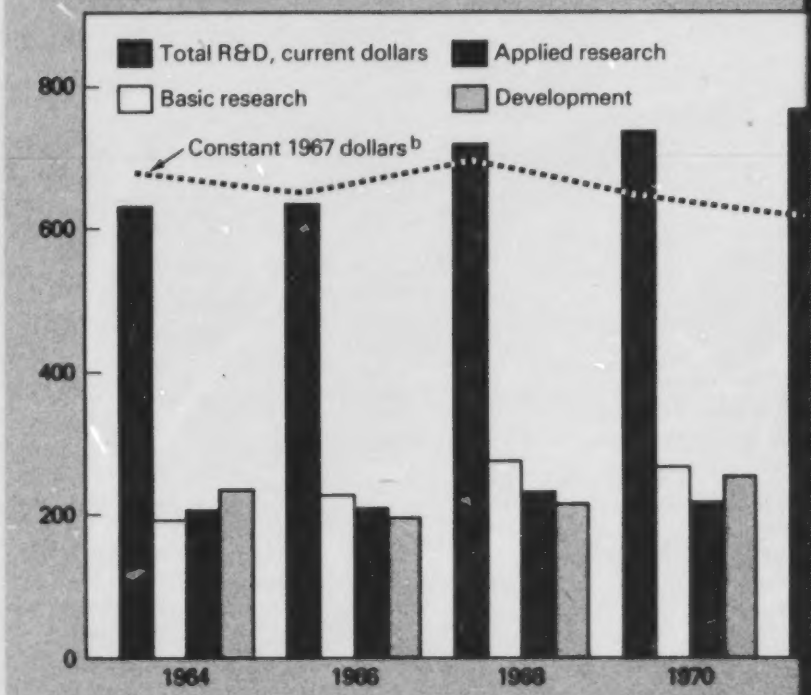
Federally Funded Research and Development Centers (FFRDC's) are R&D-performing organizations substantially financed by the Federal Government to meet either a particular R&D objective or to provide major facilities at universities for research. Federal agencies' funds accounted for 99 percent of R&D expenditures by FFRDC's in 1973. Data presented here are excluded from those for universities and colleges shown in part I of this report.

Each FFRDC is a separate operational unit which conducts R&D work upon direct request of, or under a board charter from, the sponsoring Federal agency. Organizationally, the centers are separate from the administering institution, and are self-contained entities insofar as their R&D work is concerned.

The 23 university-administered FFRDC's in this survey had $817 million in current R&D expenditures in 1973, up 7 percent or $53 million more than in 1972. Since 1964, when spending amounted to $629 million, R&D expenditures by FFRDC's have increased at an annual rate of 3 percent to $817 million in 1973. In constant dollars R&D spending declined 1 percent annually over this period. Outlays for basic research increased $47 million in 1973 and now account for $297 million, or 36 percent of the total R&D effort by FFRDC's.

R&D expenditures for applied research increased less than $1 million in 1973; therefore, outlays for applied research as a portion of total R&D expenditures fell from 30 percent in 1972 to 28 percent in 1973. R&D expenditures for development amounted to $294 million in 1973, or $6 million more than 1972.

R&D expenditures at university-administered FFRD work, FY 1964-74



[a]Federally Funded Research and Development Centers.
[b]Based on GNP, implicit price deflator.
SOURCE: National Science Foundation.

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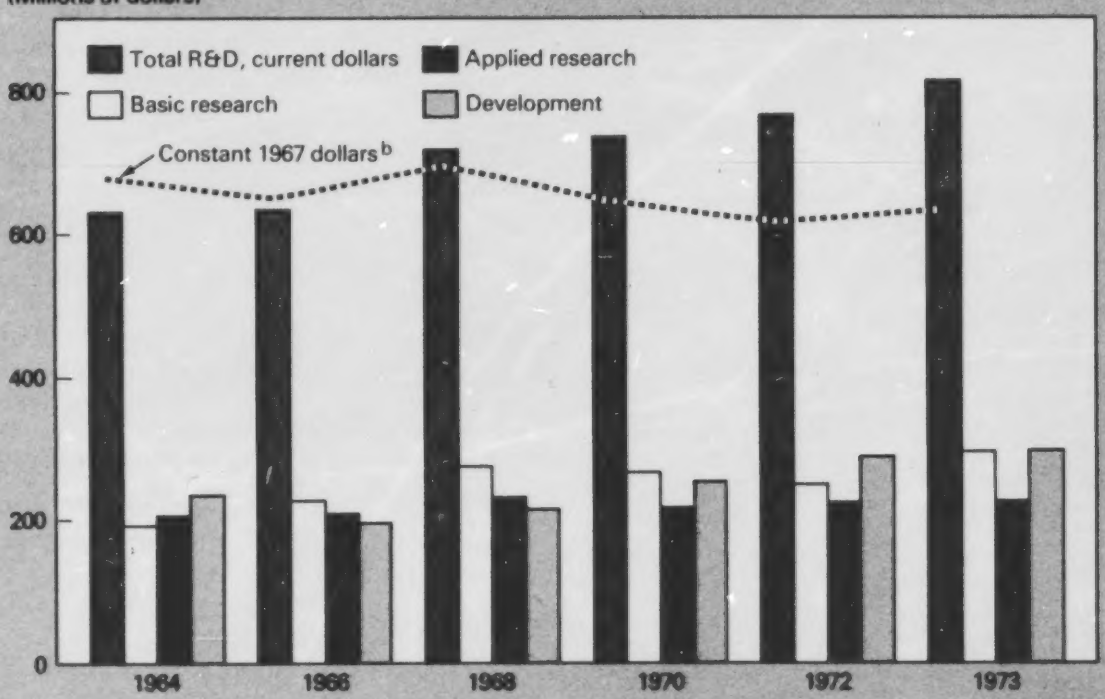
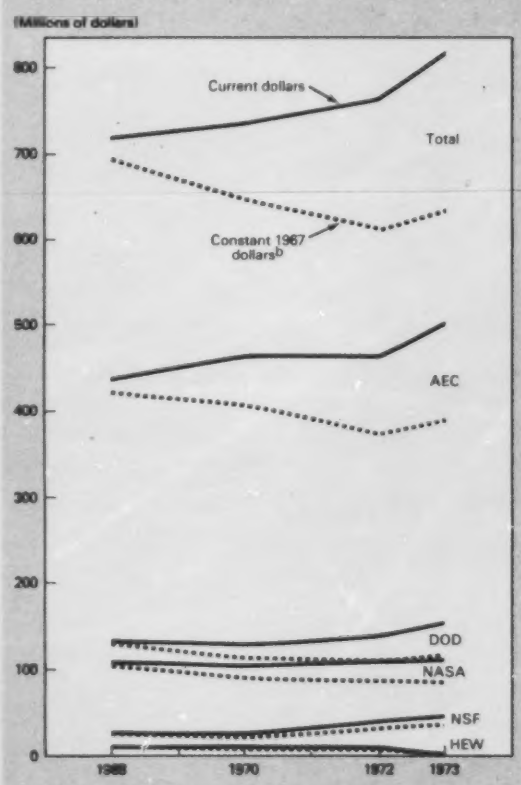
R&D expenditures at university-administered FFRDC's[a], by character of work, FY 1964-74



[a]Federally Funded Research and Development Centers.
[b]Based on GNP, implicit price deflator.
SOURCE: National Science Foundation.

Since 1968 R&D expenditures at NSF-sponsored FFRDC's have grown at an annual rate of 10 percent. AEC and DOD have had annual growth rates of 3 percent each, while R&D expenditures by NASA-sponsored FFRDC's have increased at an annual rate of only 1 percent. In constant dollars, only NSF-sponsored FFRDC's have shown an increasing growth rate — 5 percent. AEC and DOD have had average annual declines during this period of 2 percent, while NASA has had an annual decline of 4 percent per year.

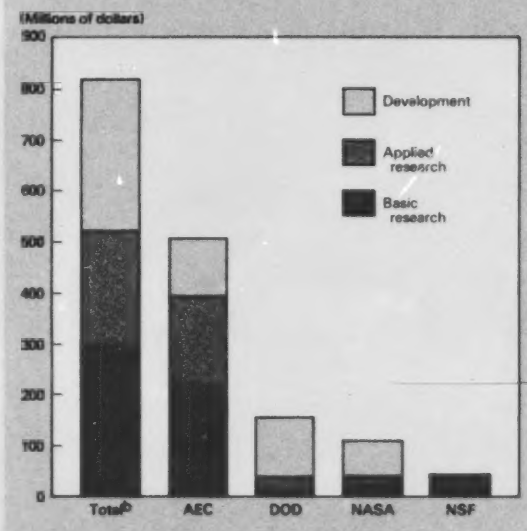
Current R&D expenditures at university-administered FFRDC's,[a] by sponsoring Federal agency, FY 1968-73



[a]Federally Funded Research and Development Centers.
[b]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

Eleven AEC-sponsored FFRDC's accounted for $505 million, or 62 percent of total R&D expenditures in 1973. Those sponsored by DOD ranked second with 19 percent or $156 million, while NASA and NSF supported 14 percent and 6 percent, respectively. AEC sponsored $221 million, or 74 percent of all basic research spending. NSF-sponsored FFRDC's earmarked all of their expenditures — $45 million for basic research — thus accounting for 15 percent of all basic research outlays. AEC supported 77 percent, or $173 million, of applied research. DOD- and NASA- sponsored FFRDC's accounted for an additional $35 million and $18 million, respectively, in applied research support. DOD supported 39 percent, or $115 million of all development outlays. AEC ranked second with $110 million, or 37 percent.

Distribution of current R&D expenditures at university-administered FFRDC's,[a] by character of work and sponsoring Federal agency, FY 1973



[a]Federally Funded Research and Development Centers.
[b]Includes $4.1 million in non-Federal funds.
SOURCE: National Science Foundation.

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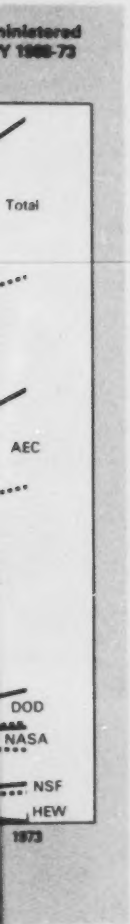

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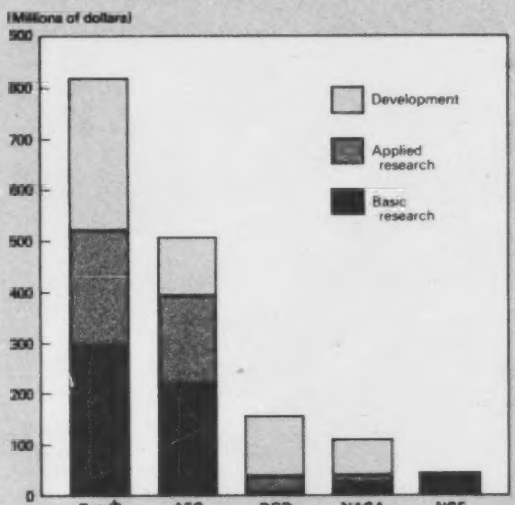
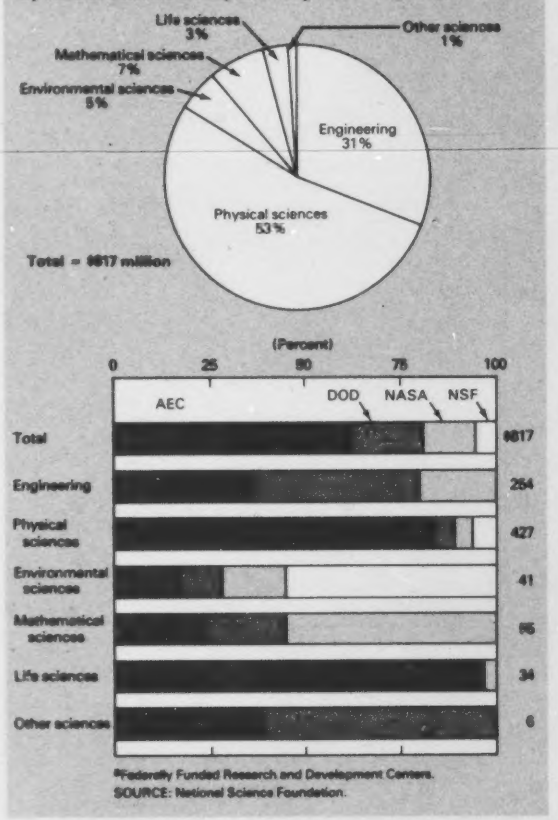


[a]Federally Funded Research and Development Centers.
[b]Includes $4.1 million in non-Federal funds.
SOURCE: National Science Foundation.

R&D expenditures by university-administered FFRDC's were primarily concentrated in the physical sciences and engineering. The physical sciences accounted for 52 percent, or $427 million of total R&D outlays, 84 percent of which was supported by AEC. Engineering accounted for $254 million, or 31 percent, of total R&D expenditures, of which 44 percent was spent in NASA-sponsored FFRDC's. AEC supported an additional 36 percent of engineering outlays as well as 95 percent of all life science expenditures. NASA supported 55 percent of mathematical science expenditures and NSF funded 55 percent of environmental spending.

R&D expenditures at university-administered FFRDC's,[a] by field of science and sponsoring Federal agency, FY 1973



[a]Federally Funded Research and Development Centers.
SOURCE: National Science Foundation.

In 1973 expenditures by FFRDC's for research in the physical sciences dropped to $427 million — 1 percent below 1972 levels. Outlays for engineering research increased $56 million — or 28 percent — to $254 million. R&D expenditures for the mathematical sciences totaled $55 million, an increase of $13 million, or 31 percent from 1972. In the social sciences R&D expenditures declined 84 percent in 1972, from $9 million to $1 million. This decline was caused by a reclassification of 10 Office of Education FFRDC's. Beginning in 1973, awards to these centers were on a competitive basis, therefore, they were considered integral components of universities and are included in part I. Other fields of science that experienced declines in 1973 were psychology, which fell 36 percent to $1 million, and the life sciences, which declined 6 percent to $34 million.

R&D expenditures for engineering have grown at the greatest annual rate of any field of science since 1964. This 6-percent growth rate was primarily due to a large increase in 1973 outlays. Both the environmental and mathematical sciences increased 4 percent annually since 1964. Again, large expenditure increases in 1973 represent a major portion of the growth. Outlays for the physical and life sciences remained relatively stable since 1964. Psychology had the greatest annual decline — 17 percent — while R&D expenditures in the social sciences increased at an annual rate of 24 percent until 1972. From 1972 to 1973 R&D outlays for the social sciences declined 84 percent. This decline was due to the change in status of the OE-sponsored FFRDC's.

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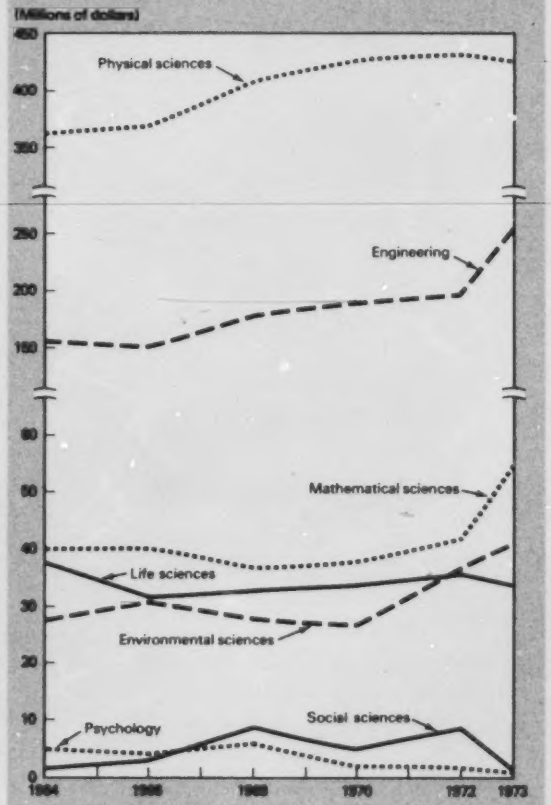
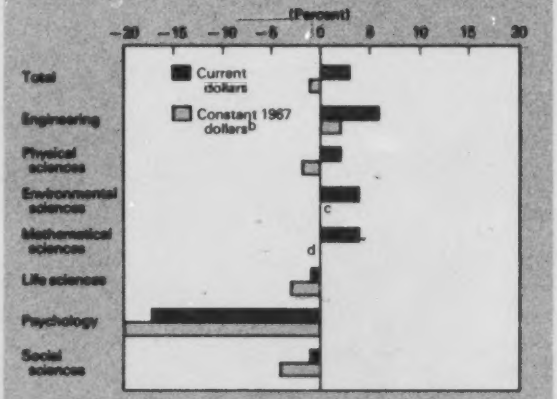
Current R&D expenditures in university-administered FFRDC's,[a] by field of science, FY 1964-73



[a]Federally Funded Research and Development Centers.
SOURCE: National Science Foundation.

Average annual percent change in R&D expenditures at university-administered FFRDC's,[a] by field of science, FY 1964-73



[a]Federally Funded Research and Development Centers.
[b]Based on GNP implicit price deflator.
[c]Less than 1 percent average annual growth.
[d]Less than 1 percent average annual decline.
SOURCE: National Science Foundation.

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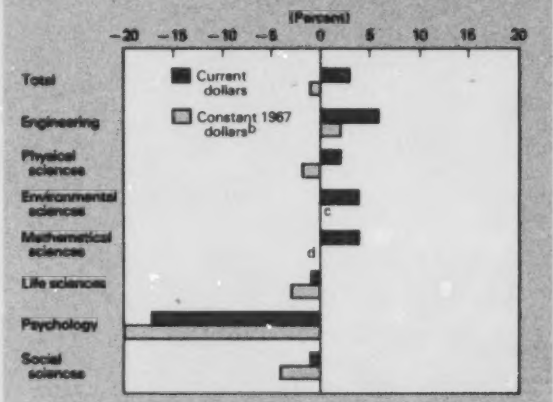
Average annual percent change in R&D expenditures at university-administered FFRDC's,[a] by field of science, FY 1964-73

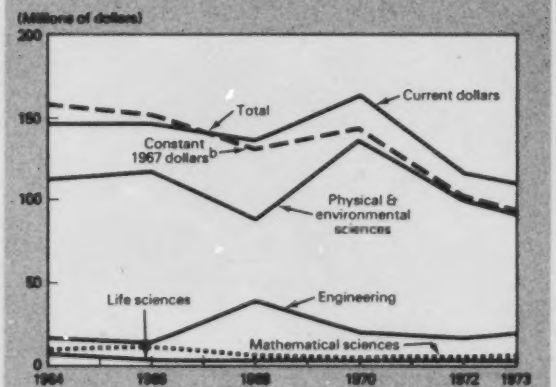


[a]Federally Funded Research and Development Centers.
[b]Based on GNP implicit price deflator.
[c]Less than 1 percent average annual growth.
[d]Less than 1 percent average annual decline.
SOURCE: National Science Foundation.

In constant dollars, engineering increased at an annual rate of 2 percent from 1964 to 1973. Expenditures for the mathematical and environmental sciences remained relatively stable. All other fields of science declined in constant dollars, with psychology showing the greatest annual decline, 20 percent.

Capital expenditures for scientific and engineering facilities and equipment for research and development totaled $121 million in 1973. This represented a decline from 1972 of $7 million, or 5 percent. Since 1964 capital outlays have remained relatively stable for all fields of science except the physical and environmental sciences. In 1968 capital expenditures for these areas totaled $89 million. Two years later, in 1970, this figure had increased 54 percent to $137 million. But in 1973 R&D outlays to these fields totaled $93 million, or one-third less than the 1970 figure. These fluctuations are primarily responsible for the sharp peak in total capital expenditures in 1970 — $163 million — and subsequent decline by 1973 to $121 million.

R&D expenditures in university-administered FFRDC's[a] for scientific and engineering facilities and equipment, by field of science, FY 1964-73



[a]Federally Funded Research and Development Centers.
[b]Based on GNP implicit price deflator.
SOURCE: National Science Foundation.

APPENDIXES

A. Technical notes

B. Universities and colleges (Part I): Statistical tables and reproduction of survey form (including aggregate data)

C. FFRDC's (Part II): Listing, statistical tables and reproduction of survey form (including aggregate data)

D. Reproduction of Covering Letter and Instructions

APPENDIX A
Technical Notes

Scope and Coverage

This report is based upon the National Science Foundation's (NSF) "Survey of Scientific Activities of Institutions of Higher Education (Current and Capital Expenditures for Research, Development, and Instruction in the Sciences and Engineering, FY 1973)."[1] Mail questionnaires were sent to 621 universities, including all institutions that grant doctorate or master's degrees in the sciences or engineering and all other academic institutions believed to perform $50,000 or more in R&D expenditures.

Followup queries were mailed in September, November, and January; telephone contact was maintained with the 200 institutions believed on the basis of prior surveys to have spent the largest amounts on R&D expenditures. By July 31, 1974 (last date prior to computer tabulations), 571 academic institutions, or 92 percent of the universe, returned usable questionnaires, including *all* of the 100 largest R&D performers.

[1]Data obtained in earlier surveys in the series have been published by NSF in *Scientific Activities at Universities and Colleges, 1964* (NSF 68-22), 1968; *Resources for Scientific Activities at Universities and Colleges, 1969* (NSF 70-16), 1970; and *Resources for Scientific Activities at Universities and Colleges, 1971* (NSF 72-315), 1972 (Washington, D.C. 20402: Supt. of Documents, U.S. Government Printing Office). No separate reports were issued on the 1972 and 1966 surveys; however, results of these surveys are included in this report. Data collected in the three surveys conducted prior to the inception of the present series have been published in NSF's *Scientific Research and Development in Colleges and Universities — Expenditures and Manpower, 1953-54*; 1958; *Scientific Research and Development in Colleges and Universities — Expenditures and Manpower, 1958*; 1963; and *Scientists and Engineers in Colleges and Universities, 1961*; 1965.

Limitations

The statistics presented in this report are subject to response and concept errors caused by several factors: differences between university concepts and survey definitions of R&D activities, and by variations in university accounting procedures. Consequently, the difficulty of defining R&D expenditures in the sciences and engineering adversely affects the accuracy of the data provided by respondents. As the survey series closes its sixth cycle, however, the magnitude of the error attributable to the inadequacy of institutional record-keeping procedures is constantly decreasing, as more institutions, especially the larger ones, revise their procedures to yield the information requested. Since the large universities account for the vast majority of R&D activities in the sciences and engineering, the quality of their statistical reports has significant impact on the overall reliability of the survey data.

Methods of Estimating for Nonresponse

In order to derive universe estimates of financial resources presented in this report, estimates were made for 50 institutions that failed to respond to the survey, as well as for nonsurveyed institutions. These estimates were based on three types of sources: First, other surveys such as the Higher Education General Information Survey, conducted annually by the U. S. Office of Education or NSF's CASE system; second, institutional sources such as treasurer's reports; and third, completed questionnaires from institutions that reported data in earlier surveys.

Totals from these sources were distributed (by field of science, function, etc.) by computer. At the heart of the imputation program is a deterministic/stochastic algorithm which involves the selection of a summary distribution based upon respondent characteristics by level of degree granted and type of control. The same system was used in those cases where institutions reported total values for particular items but were unable to give detailed breakdowns. The tabulation below shows that more than nine-tenths of all surveyed institutions responded. Table A-1 shows that R&D estimates

Type of institution	Number surveyed	Respondents	
		Number	Percent of total
Total	621	571	91.9
Doctorate	280	259	92.4
Master's	228	211	92.5
Bachelor's and no science degree	116	101	87.1

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Psychological sciences
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Other sciences

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Limitations

The statistics presented in this report are subject to response and concept errors caused by several factors: differences between university concepts and survey definitions of R&D activities, and by variations in university accounting procedures. Consequently, the difficulty of defining R&D expenditures in the sciences and engineering adversely affects the accuracy of the data provided by respondents. As the survey series closes its sixth cycle, however, the magnitude of the error attributable to the inadequacy of institutional record-keeping procedures is constantly decreasing, as more institutions, especially the larger ones, revise their procedures to yield the information requested. Since the large universities account for the vast majority of R&D activities in the sciences and engineering, the quality of their statistical reports has significant impact on the overall reliability of the survey data.

Methods of Estimating for Nonresponse

In order to derive universe estimates of financial resources presented in this report, estimates were made for 50 institutions that failed to respond to the survey, as well as for nonsurveyed institutions. These estimates were based on three types of sources: First, other surveys such as the Higher Education General Information Survey, conducted annually by the U. S. Office of Education or NSF's CASE system; second, institutional sources such as treasurer's reports; and third, completed questionnaires from institutions that reported data in earlier surveys.

Totals from these sources were distributed (by field of science, function, etc.) by computer. At the heart of the imputation program is a deterministic/stochastic algorithm which involves the selection of a summary distribution based upon respondent characteristics by level of degree granted and type of control. The same system was used in those cases where institutions reported total values for particular items but were unable to give detailed breakdowns. The tabulation below shows that more than nine-tenths of all surveyed institutions responded. Table A-1 shows that R&D estimates for nonrespondents totaled $94 million, or 3 percent of the $2.9 billion universe. Only 21 doctorate and 17 master's-granting institutions failed to respond to the survey. Imputation rates for instruction and departmental research amounted to about 8 percent of the total (table A-2). The imputation rates for the departmental research component were substantially higher (39 percent), reflecting the conceptual difficulties of reporting.

Type of institution	Number surveyed	Respondents	
		Number	Percent of total
Total	621	571	91.9
Doctorate	280	259	92.4
Master's	228	211	92.5
Bachelor's and no science degree	116	101	87.1

Table A-2. Estimated current expenditures for instruction and departmental research for nonrespondent graduate-degree-granting institutions in the sciences and engineering, by field of science; FY 1973

[Dollars in thousands]

Field of science	Instruction and departmental research		Departmental research	
	Estimated amount	Percent	Estimated amount	Percent
Total	$270,581	7.7	$167,431	38.6
Engineering	21,973	5.6	16,029	37.3
Physical sciences	30,480	8.0	17,448	36.3
Environmental sciences	8,159	8.2	4,837	35.1
Mathematical sciences	19,527	7.7	9,992	36.5
Life sciences	110,947	8.3	74,278	38.9
Psychological sciences	15,290	9.3	6,252	36.4
Social sciences	51,478	7.2	32,001	40.8
Other sciences	12,727	8.2	6,594	45.2

Changes in Reporting Concepts for Fields of Science

Total R&D expenditures were collected by field of science for the first time in 1973. Prior to 1973, only research expenditures (basic and applied) were collected by field of science. Estimates for development expenditures by field of science were made by NSF by (a) contacting major universities with large development expenditures to ascertain how their development expenditures were distributed by field of science, and (b) utilizing field of science growth patterns in these institutions to prorate development in earlier years. Between 1964 and 1972 estimates for development expenditures, accounting for approximately 3 percent of total R&D expenditures, were added to each appropriate field of science.

TABLE A-1. CURRENT R&D EXPENDITURES ESTIMATED FOR NONRESPONDENT UNIVERSITIES AND COLLEGES BY TYPE OF INSTITUTION, FY 1971 1/

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER AND FIELD	TOTAL		INSTITUTIONS GRANTING DEGREES IN SCIENCE & ENGINEERING					
			DOCTORATE		MASTER'S		BACHELOR'S	
	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERC OF TOT
TOTAL	$93,953	3.2	$81,134	2.8	$6,928	14.8	$5,416	23
SOURCE OF FUNDS:								
FEDERAL GOVERNMENT	64,961	3.2	56,607	2.8	4,992	16.3	3,055	16
STATE GOVERNMENT	4,621	1.7	3,820	1.4	610	15.5	158	37
LOCAL GOVERNMENT	599	4.2	439	3.2	54	10.5	95	30
FOUNDATIONS & VOLUNTARY HEALTH AGENCIES	18,641	14.1	17,657	13.8	461	15.4	501	41
INDUSTRY	6,595	7.6	6,154	7.3	217	12.5	223	36
INSTITUTION'S OWN FUNDS	5,813	1.8	4,150	1.3	907	14.6	655	41
OTHER SOURCES	3,318	4.8	3,001	4.5	110	13.1	207	42
CHARACTER OF WORK:								
BASIC RESEARCH	361,677	17.6	354,695	17.5	4,169	19.5	2,745	27
APPLIED RESEARCH	169,019	24.0	158.099	23.4	3,283	20.0	7,311	66
DEVELOPMENT	27,375	16.1	25,687	16.2	1,137	12.6	470	26
FIELD OF SCIENCE:								
ENGINEERING (TOTAL)	13,986	3.6	13,252	3.5	523	14.8	195	15
PHYSICAL SCIENCES (TOTAL)	12,235	3.6	9,263	2.8	1,732	17.1	1,209	27
(1) ASTRONOMY	245	1.0	151	0.6	83	40.1	11	28
(2) CHEMISTRY	4,771	4.1	3,683	3.4	667	16.9	414	25
(3) PHYSICS	5,407	3.2	4,134	2.5	487	20.8	763	28
(4) OTHER PHYSICAL SCIENCES, NEC	2,066	6.8	1,515	5.7	518	14.2	32	46
ENVIRONMENTAL SCIENCES (TOTAL)	3,701	1.8	2,257	1.2	874	20.2	362	31
MATHEMATICAL SCIENCES (TOTAL)	2,566	3.4	2,260	3.1	148	12.6	151	24
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	2,588	7.2	2,270	6.6	213	30.0	98	24
(2) COMPUTER SCIENCES	2,816	7.2	2,564	6.7	192	41.4	60	28
LIFE SCIENCES (TOTAL)	51,419	3.4	48,236	3.2	1,316	13.1	1,786	36
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	28,324	3.6	25,533	3.3	1,121	14.1	1,603	39
(2) CLINICAL MEDICAL	33,048	5.1	32,571	5.1	153	13.3	310	70
(3) OTHER LIFE SCIENCES, NEC	2,880	3.7	2,726	3.6	42	4.5	112	27
PSYCHOLOGY (TOTAL)	3,264	4.4	2,399	3.4	491	21.2	358	25
SOCIAL SCIENCES (TOTAL)	10,104	4.3	6,223	2.9	1,916	16.1	1,852	22
(1) ECONOMICS	1,454	3.1	1,297	2.9	107	10.3	50	16
(2) POLITICAL SCIENCE	763	3.0	590	2.4	130	16.6	42	24
(3) SOCIOLOGY	3,329	5.4	1,364	2.6	441	18.3	1,523	22
(4) OTHER SOCIAL SCIENCES, NEC	6,460	6.3	4,843	5.2	1,269	16.5	237	30
OTHER SCIENCES, NEC (TOTAL)	3,012	2.9	2,311	2.3	509	14.9	189	25

1/The imputed dollar volume of separately budgeted R&D expenditures of nonrespondent institutions amounted to $94 million, o $2.9 billion universe total for all universities and colleges, both respondents and nonrespondents.

ABLE A-1. CURRENT R&D EXPENDITURES ESTIMATED FOR NONRESPONDENT UNIVERSITIES AND COLLEGES BY TYPE OF INSTITUTION, FY 1971 1/

(DOLLARS IN THOUSANDS)

	TOTAL		INSTITUTIONS GRANTING DEGREES IN SCIENCE & ENGINEERING						NO SCIENCE DEGREE	
			DOCTORATE		MASTER'S		BACHELOR'S			
	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
	$93,953	3.2	$81,134	2.8	$6,928	14.8	$5,416	23.8	$475	22.9
.....	64,961	3.2	56,607	2.8	4,992	16.3	3,055	16.9	307	19.0
.....	4,621	1.7	3,820	1.4	610	15.5	158	37.4	33	31.1
.....	599	4.2	439	3.2	54	10.5	95	30.8	11	57.9
.....	18,641	14.1	17,657	13.8	461	15.4	501	41.9	22	59.5
.....	6,595	7.6	6,154	7.3	217	12.5	223	36.6	1	100.0
.....	5,813	1.8	4,150	1.3	907	14.6	655	41.0	101	34.8
.....	3,318	4.8	3,001	4.5	110	13.1	207	42.2	0	0.0
.....	361,677	17.6	354,695	17.5	4,169	19.5	2,745	27.0	68	89.5
.....	169,019	24.0	158.099	23.4	3,283	20.0	7,311	68.0	326	20.2
.....	27,375	16.1	25,687	16.2	1,137	12.6	470	26.1	81	21.2
.....	13,986	3.6	13,252	3.5	523	14.8	195	15.1	16	14.2
.....	12,235	3.6	9,263	2.8	1,732	17.1	1,209	27.2	31	29.0
.....	245	1.0	151	0.6	83	40.1	11	28.2	0	0.0
.....	4,771	4.1	3,683	3.4	667	16.9	414	25.0	7	58.3
.....	5,407	3.2	4,134	2.5	487	20.8	763	28.5	23	24.5
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.....	51,419	3.4	48,236	3.2	1,316	13.1	1,786	36.6	81	95.3
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EC.....	2,880	3.7	2,726	3.6	42	4.5	112	27.1	0	0.0
.....	3,264	4.4	2,399	3.4	491	21.2	358	25.5	16	100.0
.....	10,104	4.3	6,223	2.9	1,916	16.1	1,852	22.7	113	35.9
.....	1,454	3.1	1,297	2.9	107	10.3	50	16.9	0	0.0
.....	763	3.0	590	2.4	130	16.6	42	24.0	1	100.0
.....	3,329	5.4	1,364	2.6	441	18.3	1,523	22.0	1	100.0
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.....	3,012	2.9	2,311	2.3	509	14.9.	189	25.1	3	2.9

eparately budgeted R&D expenditures of nonrespondent institutions amounted to $94 million, or 3.2 percent of the all universities and colleges, both respondents and nonrespondents.

Efforts to Improve Data Quality

The National Science Foundation, as part of its program to measure the reliability and validity of its survey statistics, contracted for three special studies to assess the abilities of institutions to provide accurate R&D statistics and to improve survey definitions and instructions. One such study consisted of a 1-year special assignment for Dr. Robert Wright, Director of Institutional Research of the Central Staff of the State University of New York. Dr. Wright[2] visited 50 colleges and universities across the United States and conducted in-depth interviews with university officials who were responsible for filling out the NSF forms. As a result of Dr. Wright's study, many recommendations were made for improving survey procedures and questionnaire format, most of which were incorporated by NSF in the 1973 university and college survey systems.[3] Among the survey items showing systematic respondent problems were the following:

- Reporting information that distinguishes between basic research, applied research, and development
- Estimating expenditures for departmental research
- Identifying the sources of support of separately budgeted R&D funds
- Calculating indirect costs associated with separately budgeted R&D expenditures
- Determining how expenditures are classified by field of science.

Of the 50 institutions included in Dr. Wright's study, many had difficulty reporting the breakout of separately budgeted R&D funds by activity: basic research, applied research, and development. About one-fourth of the institutions said that all of their research was basic research "by definition" — which meant by administrative fiat or by what has previously been a high status trend, rather than using survey definitions. A large number estimated the figures using such methods as ratios developed in past reporting periods. The difficulty in reporting these data is indicated by the fact that one-fourth of the universities and colleges in the 1973 survey did not report data on basic research expenditures, largely because of its unavailability from central records.

Similarly, many institutions indicated difficulty in reporting the departmental research component of the Instruction and Departmental Research account. Of those respondent institutions, some described these reporting methods: assumed 5 percent for all fields; assumed one day's equivalent per week for departmental research; and, requested that departmental chairmen estimate the proportion of time that faculty spent on departmental research.

Among the problems encountered in identifying the sources of R&D support, many questioned what kinds of expenditures are to be included in "Institution's Own Funds." About one-third indicated that they reported the unreimbursable indirect costs defrayed by their own institution. Others included State appropriations and allocations, endowment funds, and released time of faculty. In the Federal column as a source of support for research, the NSF instructions ask that Federal funds channeled through State agencies be reported as Federal, not State, funds. But, several institutions were not able to identify such Federal funds, resulting in underreporting for Federal sources and overreporting of State funds.

About one-half of the institutions had indirect cost data in the institution's financial records. For those without records on indirect costs, an estimate was made by using such methods as the federally audited indirect cost rate and applying it to research totals. Although most institutions indicated that "unreimbursed indirect costs" were real financial factors to them, very few had actual records on which to base statistical reports.

When asked how expenditures are classified by field of science, most institutions used the department, the account, or the principal investigator's departmental assignment as the indicator. This practice of using the sponsoring department to identify field of science leads to several problems. First, expenditures may be categorized incorrectly because of the seniority or other nonscience aspects of the principal investigator, the coincidental location of facilities, and the like. Second, the reporting of expenditures by fields of science is heavily dependent on the organizational makeup of the institution, and can change as reorganizations are effected. And third, the distribution of scientific effort as defined on the NSF form might not correspond to departmental titles, especially in interdisciplinary fields.

In addition to the study conducted by Dr. Wright, the National Science Foundation engaged Columbia Research Associates to conduct a pilot study of institutional reporting to NSF expenditure and manpower surveys. The study was

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[2]Dr. Wright is now employed by the National Science Foundation as a staff associate in the Science Indicators Unit within the Division of Science Resources Studies.

[3]The principal findings of Dr. Wright's study were published by NSF in "Evaluations of the NSF Survey of Scientific Activities of Institutions of Higher Education," September 1973.

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In addition to the study conducted by Dr. Wright, the National Science Foundation engaged Columbia Research Associates to conduct a pilot study of institutional reporting to NSF expenditure and manpower surveys. The study was designed to ascertain whether it is feasible to measure the extent of reporting errors. Nine institutions were selected: Harvard University, Massachusetts Institute of Technology, Yale University, S.U.N.Y.-Albany, Columbia University, Princeton University, University of Maryland, Johns Hopkins University, and the University of Virginia. Most of these nine are major research institutions which together account for 13 percent of the Nation's academic research and development. Although a sample of only nine institutions is clearly too small to permit statistical inferences for the population, consistent patterns among these nine institutions showed the following:

(1) Overreporting of R&D expenditures

(2) Difficulty in identifying expenditures by type of research (basic, applied, and development).

(3) Departmental research expenditures generally not available.

The overreporting of R&D expenditures was principally caused by the inclusion of capital equipment, training grants, and subcontracting expenditures. NSF instructions for the 1973 survey requested that current fund expenditures for all capital equipment and facilities be *excluded* from current R&D expenditures. Respondents found it difficult to comply with this instruction since their current fund accounts usually include small equipment purchases. NSF in its 1974 R&D expenditure survey modified the definition of current R&D expenditures to include equipment expenditures that cost less than an institutionally defined minimum around $200 or $500.

Training grants were included in the research expenditures of two schools. Although some contributions to the research effort is accomplished with training grant funds, NIH, the major grantor of training funds, considers their contribution to research minor and indeterminate.

A third study was conducted under a grant from NSF by the National Center for Higher Education Management Systems (NCHEMS) with the objective of bringing the NSF survey concepts more in line with academic recordkeeping and accounting systems. In the course of this project, a document was developed on the R&D expenditure survey format and instructional framework and widely reviewed by representatives of universities and colleges throughout the country. This project and its attendant review process served to identify reporting problems that confirmed the two earlier studies.

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TABLE B-1. CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY YEAR AND SOURCE OF FUNDS, FY

(DOLLARS IN MILLIONS)

YEAR	TOTAL R&D PERFORMANCE	SOURCE			
		FEDERAL GOVERNMENT	STATE & LOCAL GOVERNMENT	INDUSTRY	OTHER NONPR INSTITUTI
1953	$ 255	$ 138	$ 37	$ 19	$ 26
1954	290	160	42	22	28
1955	312	169	47	25	30
1956	372	213	53	29	34
1957	410	229	60	34	38
1958	456	254	68	39	42
1959	526	306	76	39	47
1960	646	405	85	40	52
1961	763	500	95	40	58
1962	904	613	106	40	66
1963	1,081	760	118	41	73
1964	1,275	917	132	40	83
1965	1,474	1,073	143	41	93
1966	1,715	1,261	156	42	108
1967	1,921	1,409	164	48	119
1968	2,149	1,572	172	55	131
1969	2,225	1,600	197	60	145
1970	2,335	1,647	219	62	166
1971	2,500	1,724	255	70	177
1972	2,675	1,838	266	75	186
1973	2,934	2,044	285	86	200

R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY YEAR AND SOURCE OF FUNDS, FY 1953-73

(DOLLARS IN MILLIONS)

AL D ANCE	SOURCE				INSTITUTIONS' OWN FUNDS
	FEDERAL GOVERNMENT	STATE & LOCAL GOVERNMENT	INDUSTRY	OTHER NONPROFIT INSTITUTIONS	
55	$ 138	$ 37	$ 19	$ 26	$ 35
60	160	42	22	28	38
62	169	47	25	30	41
72	213	53	29	34	43
70	229	60	34	38	49
76	254	68	39	42	53
76	306	76	39	47	58
76	405	85	40	52	64
73	500	95	40	58	70
74	613	106	40	66	79
81	760	118	41	73	89
85	917	132	40	83	103
94	1,073	143	41	93	124
95	1,261	156	42	108	148
01	1,409	164	48	119	181
09	1,572	172	55	131	218
05	1,600	197	60	145	223
09	1,647	219	62	166	243
09	1,724	255	70	177	274
09	1,838	266	75	186	310
	2,044	285	86	200	317

TABLE B-2. CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY YEAR AND CHARACTER OF WORK, FY 19

(DOLLARS IN MILLIONS)

YEAR	TOTAL	BASIC RESEARCH		APPLIED RESEARCH		
		AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT
1953	$ 255	$ 110	43.1	$130	51.1	$ 15
1954	290	136	46.9	137	47.2	17
1955	312	159	51.0	136	43.6	17
1956	372	200	53.8	147	39.5	25
1957	410	240	58.8	145	35.4	25
1958	456	281	61.6	148	32.5	27
1959	526	343	65.2	155	29.5	28
1960	646	433	67.0	179	27.7	34
1961	763	536	70.2	192	25.2	35
1962	904	659	72.9	205	22.7	40
1963	1,081	814	75.3	227	21.0	40
1964	1,275	1,003	78.7	232	18.2	40
1965	1,474	1,138	77.2	279	18.9	57
1966	1,715	1,303	76.0	328	19.1	84
1967	1,921	1,457	75.8	374	19.5	90
1968	2,149	1,649	76.7	404	18.8	96
1969	2,225	1,711	76.9	407	18.3	107
1970	2,335	1,796	76.9	427	18.3	112
1971	2,500	1,914	76.6	474	19.0	112
1972	2,675	2,023	75.6	541	20.2	111
1973	2,934	2,058	70.1	705	24.0	171

D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY YEAR AND CHARACTER OF WORK, FY 1953-73

(DOLLARS IN MILLIONS)

	BASIC RESEARCH		APPLIED RESEARCH		DEVELOPMENT	
	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
	$ 110	43.1	$130	51.1	$ 15	5.9
	136	46.9	137	47.2	17	5.9
	159	51.0	136	43.6	17	5.4
	200	53.8	147	39.5	25	6.7
	240	58.8	145	35.4	25	6.1
	281	61.6	148	32.5	27	5.9
	343	65.2	155	29.5	28	5.3
	433	67.0	179	27.7	34	5.3
	536	70.2	192	25.2	35	4.6
	659	72.9	205	22.7	40	4.4
	814	75.3	227	21.0	40	3.7
	1,003	78.7	232	18.2	40	3.1
	1,138	77.2	279	18.9	57	3.9
	1,303	76.0	328	19.1	84	4.9
	1,457	75.8	374	19.5	90	4.7
	1,649	76.7	404	18.8	96	4.5
	1,711	76.9	407	18.3	107	4.8
	1,796	76.9	427	18.3	112	4.8
	1,914	76.6	474	19.0	112	4.5
	2,023	75.6	541	20.2	111	4.1
	2,058	70.1	705	24.0	171	5.8

TABLE B-3. CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER AND FIELD	1964	1966	1968	1970	
TOTAL CURRENT R & D EXPENDITURES	1,275,436	1,714,684	2,148,708	2,334,859	2
SOURCE OF FUNDS:					
FEDERAL GOVERNMENT	917,322	1,261,034	1,572,064	1,647,500	1
STATE GOVERNMENT	122,496	144,258	161,808	206,907	
LOCAL GOVERNMENT	9,964	11,718	10,387	11,870	
FOUNDATIONS & VOLUNTARY HEALTH AGENCIES	61,411	76,511	95,264	110,391	
INDUSTRY	40,363	42,242	55,253	60,538	
INSTITUTIONS' OWN FUNDS	102,581	147,286	217,810	243,051	
OTHER SOURCES	21,299	31,635	36,122	54,602	
CHARACTER OF WORK:					
BASIC RESEARCH	1,002,980	1,303,114	1,649,616	1,795,864	2
APPLIED RESEARCH	231,852	328,276	403,643	426,714	
DEVELOPMENT	40,604	83,294	95,449	112,281	
FIELD OF SCIENCE:					
ENGINEERING (TOTAL)	161,572	259,176	309,137	318,836	
PHYSICAL SCIENCES (TOTAL)	216,989	286,707	319,739	307,310	
(1) ASTRONOMY	15,571	22,676	24,103	18,597	
(2) CHEMISTRY	70,022	87,955	104,695	102,002	
(3) PHYSICS	119,578	159,135	172,660	161,921	
(4) OTHER PHYSICAL SCIENCES, NEC	11,818	16,941	18,281	24,790	
ENVIRONMENTAL SCIENCES (TOTAL)	54,814	68,019	120,463	125,315	
MATHEMATICAL SCIENCES (TOTAL)	32,666	42,489	57,621	72,413	
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	N/A	N/A	N/A	N/A	
(2) COMPUTER SCIENCES	N/A	N/A	N/A	N/A	
LIFE SCIENCES (TOTAL)	681,594	872,336	1,037,031	1,194,249	
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	315,471	422,483	490,607	547,193	
(2) CLINICAL MEDICAL	320,086	389,618	477,346	549,121	
(3) OTHER LIFE SCIENCES, NEC	46,037	60,235	69,078	97,935	
PSYCHOLOGY (TOTAL)	31,904	40,143	59,286	59,250	
SOCIAL SCIENCES (TOTAL)	81,539	109,279	167,986	168,669	
(1) ECONOMICS	24,068	31,695	35,017	38,616	
(2) POLITICAL SCIENCE	6,876	8,979	20,742	19,273	
(3) SOCIOLOGY	14,664	20,000	38,587	44,383	
(4) OTHER SOCIAL SCIENCES, NEC	35,931	48,605	73,640	66,397	
OTHER SCIENCES, NEC (TOTAL)	14,358	36,535	77,445	88,817	

CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

	1964	1966	1968	1970	1972	1973
PENDITURES.....	1,275,436	1,714,684	2,148,708	2,334,859	2,674,728	2,933,552
.....	917,322	1,261,034	1,572,064	1,647,500	1,838,446	2,044,358
.....	122,496	144,258	161,808	206,907	250,059	270,850
.....	9,964	11,718	10,387	11,870	15,486	14,386
NTARY						
.....	61,411	76,511	95,264	110,391	128,632	131,757
.....	40,363	42,242	55,253	60,538	74,792	86,385
FUNDS.....	102,581	147,286	217,810	243,051	309,654	317,396
.....	21,299	31,635	36,122	54,602	57,659	68,420
.....	1,002,980	1,303,114	1,649,616	1,795,864	2,023,308	2,058,430
.....	231,852	328,276	403,643	426,714	540,572	705,142
.....	40,604	83,294	95,449	112,281	110,848	169,980
).....	161,572	259,176	309,137	318,836	348,926	384,452
(TOTAL).....	216,989	286,707	319,739	307,310	334,149	340,954
.....	15,571	22,676	24,103	18,597	23,216	24,128
.....	70,022	87,955	104,695	102,002	111,668	115,091
.....	119,578	159,135	172,660	161,921	162,256	171,267
L SCIENCES, NEC..	11,818	16,941	18,281	24,790	37,009	30,468
NCES (TOTAL).....	54,814	68,019	120,463	125,315	186,782	200,376
CES (TOTAL).....	32,666	42,489	57,621	72,413	71,087	74,683
EXCLUDING IENCES).....	N/A	N/A	N/A	N/A	N/A	35,827
NCES.....	N/A	N/A	N/A	N/A	N/A	38,856
AL).....	681,594	872,336	1,037,031	1,194,249	1,353,829	1,517,994
NCLUDES L SCIENCES).....	315,471	422,483	490,607	547,193	678,647	797,206
CAL.....	320,086	389,618	477,346	549,121	604,587	642,661
IENCES, NEC.....	46,037	60,235	69,078	97,935	70,595	78,127
.....	31,904	40,143	59,286	59,250	69,213	74,376
CTAL).....	81,539	109,279	167,986	168,669	205,778	235,607
.....	24,068	31,695	35,017	38,616	46,829	46,645
ENCE.....	6,876	8,979	20,742	19,273	21,438	25,768
.....	14,664	20,000	38,587	44,383	57,537	61,089
SCIENCES, NEC....	35,931	48,605	73,640	66,397	79,974	102,105
C (TOTAL).....	14,358	36,535	77,445	88,817	104,964	105,110

TABLE B-4. CURRENT R&D EXPENDITURES IN DOCTORATE GRANTING UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER AND FIELD	1964	1966	1968	1970	1972
TOTAL CURRENT R & D EXPENDITURES	1,249,610	1,672,801	2,092,214	2,286,182	2,609,608
SOURCE OF FUNDS:					
FEDERAL GOVERNMENT	898,747	1,230,847	1,532,312	1,615,276	1,794,874
STATE GOVERNMENT	120,016	141,373	158,572	202,769	246,429
LOCAL GOVERNMENT	9,762	11,514	10,047	11,428	13,901
FOUNDATIONS & VOLUNTARY HEALTH AGENCIES	60,017	74,531	91,036	106,742	124,342
INDUSTRY	39,546	40,249	53,116	58,479	72,977
INSTITUTIONS' OWN FUNDS	100,504	143,525	211,854	237,588	300,764
OTHER SOURCES	21,018	30,762	35,277	53,900	56,321
CHARACTER OF WORK:					
BASIC RESEARCH	982,671	1,277,690	1,617,277	1,768,569	1,983,560
APPLIED RESEARCH	227,157	321,872	388,854	413,862	523,435
DEVELOPMENT	39,782	73,239	86,083	103,751	102,613
FIELD OF SCIENCE:					
ENGINEERING(TOTAL)	157,850	249,676	300,526	311,487	341,330
PHYSICAL SCIENCES(TOTAL)	213,677	283,713	307,226	297,767	322,861
(1) ASTRONOMY	15,412	22,397	23,803	18,356	22,981
(2) CHEMISTRY	71,947	84,698	97,609	97,303	106,506
(3) PHYSICS	112,530	159,833	168,343	158,182	157,029
(4) OTHER PHYSICAL SCIENCES, NEC	13,770	16,785	17,471	23,926	36,345
ENVIRONMENTAL SCIENCES (TOTAL)	49,369	62,755	114,970	121,634	180,922
MATHEMATICAL SCIENCES (TOTAL)	31,260	41,750	55,608	70,389	69,060
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	N/A	N/A	N/A	N/A	N/A
(2) COMPUTER SCIENCES	N/A	N/A	N/A	N/A	N/A
LIFE SCIENCES (TOTAL)	679,888	866,960	1,021,373	1,181,772	1,336,312
(1) BIOLOGICAL (INCLUDE AGRICULTURAL SCIENCES)	330,438	418,624	477,614	537,253	665,460
(2) CLINICAL MEDICAL	295,486	385,571	475,612	547,083	601,121
(3) OTHER LIFE SCIENCES, NEC	53,964	62,765	68,147	97,436	69,731
PSYCHOLOGY (TOTAL)	29,007	35,174	53,881	56,280	64,789
SOCIAL SCIENCES (TOTAL)	74,523	98,901	159,607	161,627	194,031
(1) ECONOMICS	16,116	21,320	33,968	37,709	45,804
(2) POLITICAL SCIENCE	9,262	12,280	20,042	18,362	20,419
(3) SOCIOLOGY	17,070	22,696	36,889	43,157	51,293
(4) OTHER SOCIAL SCIENCES, NEC	31,045	42,605	68,708	62,399	76,515
OTHER SCIENCES, NEC (TOTAL)	14,036	33,872	79,023	85,226	100,303

CURRENT R&D EXPENDITURES IN DOCTORATE GRANTING UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

CTER AND FIELD	1964	1966	1968	1970	1972	1973
D EXPENDITURES	1,249,610	1,672,801	2,092,214	2,286,182	2,609,608	2,861,895
NT	898,747	1,230,847	1,532,312	1,615,276	1,794,874	1,994,002
	120,016	141,373	158,572	202,769	246,429	266,375
	9,762	11,514	10,047	11,428	13,901	13,546
LUNTARY						
ES	60,017	74,531	91,036	106,742	124,342	127,534
	39,546	40,249	53,116	58,479	72,977	84,039
M FUNDS	100,504	143,525	211,854	237,588	300,764	309,312
	21,018	30,762	35,277	53,900	56,321	67,087
	982,671	1,277,690	1,617,277	1,768,569	1,983,560	2,026,767
	227,157	321,872	388,854	413,862	523,435	676,384
	39,782	73,239	86,083	103,751	102,613	158,744
L)	157,850	249,676	300,526	311,487	341,330	379,519
S (TOTAL)	213,677	283,713	307,226	297,767	322,861	326,246
	15,412	22,397	23,803	18,356	22,981	23,882
	71,947	84,698	97,609	97,303	106,506	109,465
	112,530	159,833	168,343	158,182	157,029	166,153
CAL SCIENCES, NEC	13,770	16,785	17,471	23,926	36,345	26,746
IENCES (TOTAL)	49,369	62,755	114,970	121,634	180,922	193,630
ENCES (TOTAL)	31,260	41,750	55,608	70,389	69,060	72,820
(EXCLUDING						
SCIENCES)	N/A	N/A	N/A	N/A	N/A	34,639
IENCES	N/A	N/A	N/A	N/A	N/A	38,181
OTAL)	679,888	866,960	1,021,373	1,181,772	1,336,312	1,503,007
(INCLUDE						
RAL SCIENCES)	330,438	418,624	477,614	537,253	665,460	785,174
DICAL	295,486	385,571	475,612	547,083	601,121	641,052
SCIENCES, NEC	53,964	62,765	68,147	97,436	69,731	76,781
L)	29,007	35,174	53,881	56,280	64,789	70,639
(TOTAL)	74,523	98,901	159,607	161,627	194,031	215,202
	16,116	21,320	33,968	37,709	45,804	45,311
CIENCE	9,262	12,280	20,042	18,362	20,419	24,810
	17,070	22,696	36,889	43,157	51,293	51,756
L SCIENCES, NEC	31,045	42,605	68,708	62,399	76,515	93,325
NEC (TOTAL)	14,036	33,872	79,023	85,226	100,303	100,832

TABLE B-5. CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS, CHARACTER OF WORK, FIELD OF SCIENCE, AND TYPE OF INSTITUTION: FY 1973

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER AND FIELD	TOTAL	INSTITUTIONS GRANTING DEGREES IN SCIENCE & ENGINEERING			NO SCIENCE DEGREE
		DOCTORATE	MASTER'S	BACHELOR'S	
TOTAL CURRENT R&D EXPENDITURES	2,933,552	2,861,895	46,876	22,711	2,070
SOURCE OF FUNDS:					
FEDERAL GOVERNMENT	2,044,358	1,994,002	30,653	18,088	1,615
STATE GOVERNMENT	270,850	266,375	3,947	422	106
LOCAL GOVERNMENT	14,386	13,546	513	308	19
FOUNDATIONS & VOLUNTARY HEALTH AGENCIES	131,757	127,534	2,991	1,195	37
INDUSTRY	86,385	84,039	1,735	610	1
INSTITUTIONS' OWN FUNDS	317,396	309,312	6,196	1,598	290
OTHER SOURCES	68,420	67,087	841	490	2
CHARACTER OF WORK:					
BASIC RESEARCH	2,058,430	2,026,767	21,424	10,163	76
APPLIED RESEARCH	705,142	676,384	16,396	10,750	1,612
DEVELOPMENT	169,980	158,744	9,056	1,798	382
FIELD OF SCIENCE:					
ENGINEERING (TOTAL)	384,452	379,519	3,525	1,295	113
PHYSICAL SCIENCES (TOTAL)	340,954	326,246	10,157	4,444	107
(1) ASTRONOMY	24,128	23,882	207	39	0
(2) CHEMISTRY	115,091	109,465	3,955	1,659	12
(3) PHYSICS	171,267	166,153	2,343	2,677	94
(4) OTHER PHYSICAL SCIENCES, NEC	30,468	26,746	3,652	69	1
ENVIRONMENTAL SCIENCES (TOTAL)	200,376	193,630	4,333	1,160	1,253
MATHEMATICAL SCIENCES (TOTAL)	74,683	72,820	1,174	613	76
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	35,827	34,639	710	402	76
(2) COMPUTER SCIENCES	38,856	38,181	464	211	0
LIFE SCIENCES (TOTAL)	1,517,994	1,503,007	10,022	4,880	85
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	797,206	785,174	7,938	4,027	67
(2) CLINICAL MEDICAL	642,661	641,052	1,152	439	18
(3) OTHER LIFE SCIENCES, NEC	78,127	76,781	932	414	0
PSYCHOLOGY (TOTAL)	74,376	70,639	2,317	1,404	16
SOCIAL SCIENCES (TOTAL)	235,607	215,202	11,928	8,162	315
(1) ECONOMICS	46,645	45,311	1,038	296	0
(2) POLITICAL SCIENCE	25,768	24,810	782	175	1
(3) SOCIOLOGY	61,089	51,756	2,413	6,919	1
(4) OTHER SOCIAL SCIENCES, NEC	102,105	93,325	7,695	772	313
OTHER SCIENCES, NEC (TOTAL)	105,110	100,832	3,420	753	105

TABLE B-6. CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, FIELD OF SCIENCE, AND CONTROL: FY 1973

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER AND FIELD	TOTAL	TYPE OF CONTROL			
		PRIVATE	PUBLIC		
			TOTAL	FEDERAL	STATE	LOCAL
TOTAL CURRENT R&D EXPENDITURES	2,933,552	1,137,123	1,796,429	5,086	1,761,500	29,843
SOURCE OF FUNDS:						
FEDERAL GOVERNMENT	2,044,358	898,938	1,145,420	5,086	1,121,328	19,006
STATE GOVERNMENT	270,850	26,690	244,160	0	243,705	455
LOCAL GOVERNMENT	14,386	5,517	8,869	0	8,033	836
FOUNDATIONS & VOLUNTARY HEALTH AGENCIES	131,757	71,217	60,540	0	58,233	2,307
INDUSTRY	86,385	34,255	52,130	0	51,219	911
INSTITUTIONS' OWN FUNDS	317,396	68,298	249,098	0	246,262	2,836
OTHER SOURCES	68,420	32,208	36,212	0	32,720	3,492
CHARACTER OF WORK:						
BASIC RESEARCH	2,058,430	895,844	1,162,586	1,625	1,146,004	14,957
APPLIED RESEARCH	705,142	170,691	534,451	3,299	517,294	13,858
DEVELOPMENT	169,980	70,588	99,392	162	98,202	1,028
FIELD OF SCIENCE:						
ENGINEERING (TOTAL)	384,452	179,444	205,008	2,062	201,089	1,857
PHYSICAL SCIENCES (TOTAL)	340,954	146,842	194,112	709	192,426	977
(1) ASTRONOMY	24,128	9,642	14,486	0	14,466	20
(2) CHEMISTRY	115,091	48,768	66,323	167	65,740	416
(3) PHYSICS	171,267	83,134	88,133	542	87,166	425
(4) OTHER PHYSICAL SCIENCES, NEC	30,468	5,298	25,170	0	25,054	116
ENVIRONMENTAL SCIENCES (TOTAL)	200,376	54,966	145,410	658	144,283	469
MATHEMATICAL SCIENCES (TOTAL)	74,683	32,903	41,780	1,008	40,341	431
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	35,827	15,697	20,130	200	19,644	286
(2) COMPUTER SCIENCES	38,856	17,206	21,650	808	20,697	145
LIFE SCIENCES (TOTAL)	1,517,994	580,859	937,135	200	914,305	22,630
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	797,206	240,005	557,201	149	549,088	7,964
(2) CLINICAL MEDICAL	642,661	318,463	324,198	18	309,801	14,379
(3) OTHER LIFE SCIENCES, NEC	78,127	22,391	55,736	33	55,416	287
PSYCHOLOGY (TOTAL)	74,376	26,072	48,304	7	47,321	976
SOCIAL SCIENCES (TOTAL)	235,607	77,662	157,945	323	156,410	1,212
(1) ECONOMICS	46,645	13,566	33,079	128	32,885	66
(2) POLITICAL SCIENCE	25,768	6,804	18,964	116	18,645	203
(3) SOCIOLOGY	61,089	17,069	44,020	54	43,387	579
(4) OTHER SOCIAL SCIENCES, NEC	102,105	40,223	61,882	25	61,493	364
OTHER SCIENCES, NEC (TOTAL)	105,110	38,375	66,735	119	65,325	1,291

TABLE B-7. FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY CHARACTER OF WORK, FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1964	1966	1968	1970	
TOTAL	917,322	1,261,034	1,572,064	1,647,500	1,
CHARACTER OF WORK:					
BASIC RESEARCH	766,225	1,008,805	1,250,782	1,296,120	1,
APPLIED RESEARCH	128,405	193,515	253,577	267,651	
DEVELOPMENT	22,692	58,714	67,705	83,729	
FIELD OF SCIENCE:					
ENGINEERING (TOTAL)	126,962	209,248	246,191	245,888	
PHYSICAL SCIENCES (TOTAL)	187,457	247,603	273,048	257,822	
(1) ASTRONOMY	13,651	20,123	21,079	15,516	
(2) CHEMISTRY	55,410	68,955	82,668	78,942	
(3) PHYSICS	109,938	146,058	156,241	144,306	
(4) OTHER PHYSICAL SCIENCES, NEC	8,458	12,467	13,060	19,058	
ENVIRONMENTAL SCIENCES (TOTAL)	44,891	54,325	88,691	88,127	
MATHEMATICAL SCIENCES (TOTAL)	28,128	34,394	45,610	54,338	
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	NA	NA	NA	NA	
(2) COMPUTER SCIENCES	NA	NA	NA	NA	
LIFE SCIENCES (TOTAL)	455,014	595,301	725,017	814,417	
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	176,933	252,371	306,471	334,851	
(2) CLINICAL MEDICAL	256,874	312,801	381,936	431,656	
(3) OTHER LIFE SCIENCES, NEC	21,207	30,129	36,610	47,910	
PSYCHOLOGY (TOTAL)	27,572	34,393	48,547	47,263	
SOCIAL SCIENCES (TOTAL)	42,147	61,914	100,846	94,655	
(1) ECONOMICS	10,565	15,520	17,537	17,688	
(2) POLITICAL SCIENCE	3,127	4,593	10,444	7,920	
(3) SOCIOLOGY	8,739	12,837	26,095	26,220	
(4) OTHER SOCIAL SCIENCES, NEC	19,716	28,964	46,770	42,827	
OTHER SCIENCES, NEC (TOTAL)	5,151	23,856	44,114	44,990	

FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY CHARACTER OF WORK, FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

	1964	1966	1968	1970	1972	1973
.....	917,322	1,261,034	1,572,064	1,647,500	1,838,446	2,044,358
.....	766,225	1,008,805	1,250,782	1,296,120	1,419,313	1,461,132
.....	128,405	193,515	253,577	267,651	338,747	460,558
.....	22,692	58,714	67,705	83,729	80,386	122,668
.....	126,962	209,248	246,191	245,888	260,071	288,310
TAL).....	187,457	247,603	273,048	257,822	270,457	280,904
.....	13,651	20,123	21,079	15,516	17,984	17,704
.....	55,410	68,955	82,668	78,942	85,179	88,098
.....	109,938	146,058	156,241	144,306	140,105	149,282
CIENCES, NEC	8,458	12,467	13,060	19,058	27,189	25,820
S (TOTAL)...	44,891	54,325	88,691	88,127	137,367	149,296
(TOTAL)....	28,128	34,394	45,610	54,338	53,624	56,308
LUDING CES).....	NA	NA	NA	NA	NA	28,786
S.....	NA	NA	NA	NA	NA	27,522
.....	455,014	595,301	725,017	814,417	886,963	1,012,830
UDES CIENCES)....	176,933	252,371	306,471	334,851	398,039	483,252
.....	256,874	312,801	381,936	431,656	452,063	487,712
CES, NEC....	21,207	30,129	36,610	47,910	36,861	41,866
.....	27,572	34,393	48,547	47,263	53,764	58,589
L).....	42,147	61,914	100,846	94,655	113,366	135,781
.....	10,565	15,520	17,537	17,688	21,217	22,257
E.....	3,127	4,593	10,444	7,920	8,599	10,405
.....	8,739	12,837	26,095	26,220	34,049	41,497
ENCES, NEC..	19,716	28,964	46,770	42,827	49,501	61,622
TOTAL).....	5,151	23,856	44,114	44,990	62,834	62,340

TABLE B-8. FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY CHARACTER OF WORK, FIELD OF SCIENCE, AND TYPE OF INSTITUTION: FY 1973

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	TOTAL	INSTITUTIONS GRANTING DEGREES IN SCIENCE & ENGINEERING			NO SCIENCE DEGREE
		DOCTORATE	MASTER'S	BACHELOR'S	
TOTAL	2,044,358	1,994,002	30,653	18,088	1,615
CHARACTER OF WORK:					
BASIC RESEARCH	1,461,132	1,439,081	14,933	7,074	44
APPLIED RESEARCH	460,558	438,873	10,546	9,734	1,405
DEVELOPMENT	122,668	116,048	5,174	1,280	166
FIELD OF SCIENCE:					
ENGINEERING (TOTAL)	288,310	285,011	2,125	1,121	53
PHYSICAL SCIENCES (TOTAL)	280,904	269,970	7,268	3,571	95
(1) ASTRONOMY	17,704	17,501	182	21	0
(2) CHEMISTRY	88,098	84,605	2,201	1,292	0
(3) PHYSICS	149,282	145,317	1,672	2,199	94
(4) OTHER PHYSICAL SCIENCES, NEC	25,820	22,547	3,213	59	1
ENVIRONMENTAL SCIENCES (TOTAL)	149,296	144,594	3,108	344	1,250
MATHEMATICAL SCIENCES (TOTAL)	56,308	55,157	726	418	7
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	28,786	27,973	476	330	7
(2) COMPUTER SCIENCES	27,522	27,184	250	88	0
LIFE SCIENCES (TOTAL)	1,012,830	1,002,786	6,380	3,639	25
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	483,252	475,020	5,062	3,157	13
(2) CLINICAL MEDICAL	487,712	486,806	711	183	12
(3) OTHER LIFE SCIENCES, NEC	41,866	40,960	607	299	0
PSYCHOLOGY (TOTAL)	58,589	55,801	1,752	1,026	10
SOCIAL SCIENCES (TOTAL)	135,781	120,518	7,756	7,358	149
(1) ECONOMICS	22,257	21,480	571	206	0
(2) POLITICAL SCIENCE	10,405	10,057	246	102	0
(3) SOCIOLOGY	41,497	33,350	1,441	6,706	0
(4) OTHER SOCIAL SCIENCES, NEC	61,622	55,631	5,498	344	149
OTHER SCIENCES, NEC (TOTAL)	62,340	60,165	1,538	611	26

TABLE B-9. FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY CHARACTER OF WORK, FIELD OF SCIENCE, AND CONTROL: FY 1973

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	TOTAL	TYPE OF CONTROL			
		PRIVATE	PUBLIC		
			TOTAL	FEDERAL	STATE	LOCAL
TOTAL	2,044,358	898,938	1,145,420	5,086	1,121,328	19,006
CHARACTER OF WORK:						
BASIC RESEARCH	1,461,132	702,879	758,253	1,625	746,297	10,331
APPLIED RESEARCH	460,558	131,788	328,770	3,299	317,439	8,032
DEVELOPMENT	122,668	64,271	58,397	162	57,592	643
FIELD OF SCIENCE:						
ENGINEERING (TOTAL)	288,310	154,659	133,651	2,062	130,177	1,412
PHYSICAL SCIENCES (TOTAL)	280,904	127,277	153,627	709	152,152	766
(1) ASTRONOMY	17,704	7,845	9,859	0	9,843	16
(2) CHEMISTRY	88,098	38,297	49,801	167	49,370	264
(3) PHYSICS	149,282	76,773	72,509	542	71,582	385
(4) OTHER PHYSICAL SCIENCES, NEC	25,820	4,362	21,458	0	21,357	101
ENVIRONMENTAL SCIENCES (TOTAL)	149,296	47,285	102,011	658	100,977	376
MATHEMATICAL SCIENCES (TOTAL)	56,308	29,522	26,786	1,008	25,447	331
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	28,786	13,880	14,906	200	14,507	199
(2) COMPUTER SCIENCES	27,522	15,642	11,880	808	10,940	132
LIFE SCIENCES (TOTAL)	1,012,830	442,558	570,272	200	555,870	14,202
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	483,252	181,949	301,303	149	296,185	4,969
(2) CLINICAL MEDICAL	487,712	243,974	243,738	18	234,708	9,012
(3) OTHER LIFE SCIENCES, NEC	41,866	16,635	25,231	33	24,977	221
PSYCHOLOGY (TOTAL)	58,589	21,138	37,451	7	36,629	815
SOCIAL SCIENCES (TOTAL)	135,781	49,062	86,719	323	85,888	508
(1) ECONOMICS	22,257	7,184	15,073	128	14,909	36
(2) POLITICAL SCIENCE	10,405	3,070	7,335	116	7,127	92
(3) SOCIOLOGY	41,497	12,727	28,770	54	28,528	188
(4) OTHER SOCIAL SCIENCES, NEC	61,622	26,081	35,541	25	35,324	192
OTHER SCIENCES, NEC (TOTAL)	62,340	27,437	34,903	119	34,188	596

TABLE B-10. GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	1964	1966	1968	1970	1972	1973
UNITED STATES, TOTAL	$1,275,436	1,714,684	2,148,708	2,334,859	2,674,728	2,933,552
NEW ENGLAND	149,089	207,635	253,386	285,058	326,523	339,303
CONNECTICUT	26,984	30,582	37,565	51,247	54,013	53,586
MAINE	2,745	2,771	2,886	3,371	6,021	6,688
MASSACHUSETTS	102,390	152,133	187,553	204,010	232,530	244,957
NEW HAMPSHIRE	5,143	6,769	6,626	9,004	7,712	8,835
RHODE ISLAND	8,930	12,268	14,751	12,424	19,714	17,965
VERMONT	2,897	3,112	4,005	5,002	6,533	7,272
MIDDLE ATLANTIC	257,065	343,243	438,559	448,778	482,178	530,883
NEW JERSEY	36,557	41,587	47,487	44,538	46,736	50,149
NEW YORK	149,519	208,011	265,598	274,110	304,739	347,794
PENNSYLVANIA	70,989	93,645	125,474	130,130	130,703	132,940
EAST NORTH CENTRAL	230,735	304,710	366,484	384,784	427,586	475,103
ILLINOIS	77,468	92,051	109,934	103,927	121,915	131,264
INDIANA	26,500	38,104	42,654	45,868	51,215	56,681
MICHIGAN	52,209	70,426	77,699	86,531	98,262	112,453
OHIO	39,294	51,554	68,092	71,965	72,874	77,180
WISCONSIN	35,264	52,575	68,105	76,493	83,320	97,525
WEST NORTH CENTRAL	96,542	129,703	163,946	193,235	219,925	215,912
IOWA	17,780	19,735	24,881	28,219	30,729	32,588
KANSAS	13,923	17,849	25,412	28,062	28,084	31,310
MINNESOTA	23,368	29,116	32,879	40,393	49,817	54,577
MISSOURI	27,264	42,218	53,600	64,091	78,519	65,555
NEBRASKA	6,950	8,240	12,969	18,253	19,864	18,360
NORTH DAKOTA	3,615	3,762	4,535	4,463	5,884	6,701
SOUTH DAKOTA	3,642	8,783	9,670	9,754	7,028	6,821
SOUTH ATLANTIC	146,227	200,164	257,337	284,544	322,517	360,896
DELAWARE	2,914	3,161	3,904	4,791	5,004	5,760
DISTRICT OF COLUMBIA	12,797	19,767	22,142	24,828	25,587	29,489
FLORIDA	27,079	36,303	47,958	55,797	65,585	71,225
GEORGIA	18,083	28,071	40,383	44,505	49,656	50,602
MARYLAND	36,009	43,496	54,348	52,803	63,489	70,843
NORTH CAROLINA	27,116	39,805	55,628	59,266	64,229	79,847
SOUTH CAROLINA	4,680	6,075	6,840	8,809	9,468	11,113
VIRGINIA	14,083	17,857	19,140	25,410	30,524	35,003
WEST VIRGINIA	3,466	5,629	6,994	8,335	8,975	7,014
EAST SOUTH CENTRAL	44,994	55,848	71,256	79,924	78,643	94,073
ALABAMA	11,027	13,387	18,674	19,221	21,777	26,357
KENTUCKY	8,706	10,915	12,873	14,245	14,491	17,176
MISSISSIPPI	6,687	9,580	12,428	15,310	16,913	19,055
TENNESSEE	18,574	21,966	27,281	31,148	25,462	31,485
WEST SOUTH CENTRAL	79,258	107,045	147,676	164,581	182,708	202,450
ARKANSAS	6,636	8,488	9,919	8,916	9,368	10,241
LOUISIANA	18,238	22,195	31,686	35,180	29,291	34,468
OKLAHOMA	10,754	13,713	18,915	17,824	19,659	20,030
TEXAS	43,630	62,649	87,156	102,661	124,390	137,711
MOUNTAIN	69,190	93,274	107,746	134,885	163,101	179,041

RHODE ISLAND	8,930	12,268	14,751	12,424	19,714	17,965
VERMONT	2,897	3,112	4,005	5,002	6,533	7,272
MIDDLE ATLANTIC	257,065	343,243	438,559	448,778	482,178	530,883
NEW JERSEY	36,557	41,587	47,487	44,538	46,736	50,149
NEW YORK	149,519	208,011	265,598	274,110	304,739	347,794
PENNSYLVANIA	70,989	93,645	125,474	130,130	130,703	132,940
EAST NORTH CENTRAL	230,735	304,710	366,484	384,784	427,586	475,103
ILLINOIS	77,468	92,051	109,934	103,927	121,915	131,264
INDIANA	26,500	38,104	42,654	45,868	51,215	56,681
MICHIGAN	52,209	70,426	77,699	86,531	98,262	112,453
OHIO	39,294	51,554	68,092	71,965	72,874	77,180
WISCONSIN	35,264	52,575	68,105	76,493	83,320	97,525
WEST NORTH CENTRAL	96,542	129,703	163,946	193,235	219,925	215,912
IOWA	17,780	19,735	24,881	28,219	30,729	32,588
KANSAS	13,923	17,849	25,412	28,062	28,084	31,310
MINNESOTA	23,368	29,116	32,879	40,393	49,817	54,577
MISSOURI	27,264	42,218	53,600	64,091	78,519	65,555
NEBRASKA	6,950	8,240	12,969	18,253	19,864	18,360
NORTH DAKOTA	3,615	3,762	4,535	4,463	5,884	6,701
SOUTH DAKOTA	3,642	8,783	9,670	9,754	7,028	6,821
SOUTH ATLANTIC	146,227	200,164	257,337	284,544	322,517	360,896
DELAWARE	2,914	3,161	3,904	4,791	5,004	5,760
DISTRICT OF COLUMBIA	12,797	19,767	22,142	24,828	25,587	29,489
FLORIDA	27,079	36,303	47,958	55,797	65,585	71,225
GEORGIA	18,083	28,071	40,383	44,505	49,656	50,602
MARYLAND	36,009	43,496	54,348	52,803	63,489	70,843
NORTH CAROLINA	27,116	39,805	55,628	59,266	64,229	79,847
SOUTH CAROLINA	4,680	6,075	6,840	8,809	9,468	11,113
VIRGINIA	14,083	17,857	19,140	25,410	30,524	35,003
WEST VIRGINIA	3,466	5,629	6,994	8,335	8,975	7,014
EAST SOUTH CENTRAL	44,994	55,848	71,256	79,924	78,643	94,073
ALABAMA	11,027	13,387	18,674	19,221	21,777	26,357
KENTUCKY	8,706	10,915	12,873	14,245	14,491	17,176
MISSISSIPPI	6,687	9,580	12,428	15,310	16,913	19,055
TENNESSEE	18,574	21,966	27,281	31,148	25,462	31,485
WEST SOUTH CENTRAL	79,258	107,045	147,676	164,581	182,708	202,450
ARKANSAS	6,636	8,488	9,919	8,916	9,368	10,241
LOUISIANA	18,238	22,195	31,686	35,180	29,291	34,468
OKLAHOMA	10,754	13,713	18,915	17,824	19,659	20,030
TEXAS	43,630	62,649	87,156	102,661	124,390	137,711
MOUNTAIN	69,190	93,274	107,746	134,885	163,101	179,041
ARIZONA	9,881	14,392	11,742	16,773	23,912	30,321
COLORADO	20,268	26,799	36,291	51,267	59,408	63,997
IDAHO	3,847	4,794	4,995	6,543	8,089	8,727
MONTANA	3,788	5,528	6,706	8,553	6,758	8,654
NEVADA	2,607	4,749	5,494	5,539	6,085	6,449
NEW MEXICO	14,603	16,039	19,054	19,846	21,175	18,211
UTAH	11,111	16,555	18,286	20,142	32,014	36,004
WYOMING	3,085	4,418	5,178	6,222	5,660	6,678
PACIFIC	196,505	265,851	333,976	350,023	460,832	528,609
ALASKA	4,205	7,109	8,688	9,192	15,528	16,560
CALIFORNIA	144,813	198,925	245,959	244,720	325,634	380,906
HAWAII	7,341	8,619	12,043	18,014	24,557	26,859
OREGON	15,830	20,294	25,227	30,676	32,228	34,768
WASHINGTON	24,316	30,904	42,059	47,421	62,885	69,516
OUTLYING AREAS	5,831	7,211	8,342	9,047	10,715	7,282

TABLE B-11. GEOGRAPHIC DISTRIBUTION OF TOTAL AND FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY CHARACTER OF WORK: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL R&D EXPENDITURES				FEDERALLY FINANCED R&D EXPENDITURES			
	TOTAL	BASIC RESEARCH	APPLIED RESEARCH	DEVELOPMENT	TOTAL	BASIC RESEARCH	APPLIED RESEARCH	DEVELOPMENT
UNITED STATES, TOTAL	2,933,552	2,058,430	705,142	169,980	2,044,358	1,461,132	460,558	122,668
NEW ENGLAND	339,303	223,836	72,352	43,115	282,957	185,167	58,456	39,334
CONNECTICUT	53,586	30,134	23,116	336	38,913	20,529	18,238	146
MAINE	6,688	2,762	2,579	1,347	4,423	1,835	1,725	863
MASSACHUSETTS	244,957	165,906	38,803	40,248	211,429	140,786	33,208	37,435
NEW HAMPSHIRE	8,835	6,812	1,941	82	7,347	6,123	1,224	0
RHODE ISLAND	17,965	14,400	2,679	886	16,036	12,942	2,347	747
VERMONT	7,272	3,822	3,234	216	4,809	2,952	1,714	143
MIDDLE ATLANTIC	530,883	426,979	89,308	14,596	368,812	301,425	56,845	10,542
NEW JERSEY	50,149	35,270	13,091	1,788	30,139	22,340	6,874	925
NEW YORK	347,794	281,371	56,573	9,850	245,566	200,604	37,176	7,786
PENNSYLVANIA	132,940	110,338	19,644	2,958	93,107	78,481	12,795	1,831
EAST NORTH CENTRAL	475,103	361,355	94,673	19,075	311,040	238,741	60,510	11,789
ILLINOIS	131,264	108,597	21,341	1,326	92,662	75,858	15,716	1,088
INDIANA	56,681	38,218	10,598	7,865	40,624	27,648	8,637	4,339
MICHIGAN	112,453	79,636	27,030	5,787	71,147	52,511	14,969	3,667
OHIO	77,180	47,739	28,732	709	54,830	38,137	16,191	502
WISCONSIN	97,525	87,165	6,972	3,388	51,777	44,587	4,997	2,193
WEST NORTH CENTRAL	215,912	138,025	66,272	11,615	126,767	89,654	32,614	4,499
IOWA	32,588	28,189	3,533	866	20,407	18,743	1,345	319
KANSAS	31,310	14,769	14,059	2,482	20,050	11,217	7,706	1,127
MINNESOTA	54,577	24,229	27,975	2,373	31,395	16,334	14,252	809
MISSOURI	65,555	53,808	7,003	4,744	41,947	36,545	3,444	1,958
NEBRASKA	18,360	12,989	5,083	288	7,417	4,261	3,149	7
NORTH DAKOTA	6,701	1,408	5,291	2	2,541	1,031	1,508	2
SOUTH DAKOTA	6,821	2,633	3,328	860	3,010	1,523	1,210	277
SOUTH ATLANTIC	360,896	228,495	101,208	31,193	235,885	154,344	58,095	23,446
DELAWARE	5,760	4,608	922	230	3,500	3,010	350	140
DISTRICT OF COLUMBIA	29,489	16,579	8,871	4,039	23,755	12,326	7,992	3,437
FLORIDA	71,225	49,264	17,458	4,503	41,600	29,887	9,598	2,115
GEORGIA	50,602	20,580	28,227	1,795	24,171	10,205	13,263	703
MARYLAND	70,843	46,305	11,549	12,989	54,959	32,276	10,001	12,682
NORTH CAROLINA	79,847	57,809	16,704	5,334	56,759	44,970	8,613	3,176
SOUTH CAROLINA	11,113	6,479	4,108	526	4,922	3,261	1,467	194
VIRGINIA	35,003	22,229	11,347	1,427	21,334	15,125	5,453	756
WEST VIRGINIA	7,014	4,642	2,022	350	4,885	3,284	1,358	243
EAST SOUTH CENTRAL	94,073	49,584	37,698	6,791	64,301	33,922	27,145	3,234
ALABAMA	26,357	10,280	14,978	1,099	19,189	6,187	12,499	503
KENTUCKY	17,176	9,170	4,338	3,668	9,204	4,669	2,828	1,707
MISSISSIPPI	19,055	9,201	8,551	1,303	9,060	4,789	3,636	635
TENNESSEE	31,485	20,933	9,831	721	26,848	18,277	8,182	389
WEST SOUTH CENTRAL	202,450	151,219	44,295	6,936	114,283	87,621	22,009	4,653
ARKANSAS	10,241	6,784	3,151	306	4,825	3,526	1,187	112
LOUISIANA	34,468	27,757	6,034	677	16,213	13,678	2,108	427
OKLAHOMA	20,030	12,640	5,822	1,568	11,186	7,626	2,605	955
TEXAS	137,711	104,038	29,288	4,385	82,059	62,791	16,109	3,159
MOUNTAIN	179,041	105,471	57,126	16,444	122,873	72,776	38,152	11,945
ARIZONA	30,321	20,715	6,827	2,779	15,818	10,435	3,222	2,161

RHODE ISLAND	17,965	14,400	2,679	886	16,036	12,942	2,347	747
VERMONT	7,272	3,822	3,234	216	4,809	2,952	1,714	143
MIDDLE ATLANTIC	530,883	426,979	89,308	14,596	368,812	301,425	56,845	10,542
NEW JERSEY	50,149	35,270	13,091	1,788	30,139	22,340	6,874	925
NEW YORK	347,794	281,371	56,573	9,850	245,566	200,604	37,176	7,786
PENNSYLVANIA	132,940	110,338	19,644	2,958	93,107	78,481	12,795	1,831
EAST NORTH CENTRAL	475,103	361,355	94,673	19,075	311,040	238,741	60,510	11,789
ILLINOIS	131,264	108,597	21,341	1,326	92,662	75,858	15,716	1,088
INDIANA	56,681	38,218	10,598	7,865	40,624	27,648	8,637	4,339
MICHIGAN	112,453	79,636	27,030	5,787	71,147	52,511	14,969	3,667
OHIO	77,180	47,739	28,732	709	54,830	38,137	16,191	502
WISCONSIN	97,525	87,165	6,972	3,388	51,777	44,587	4,997	2,193
WEST NORTH CENTRAL	215,912	138,025	66,272	11,615	126,767	89,654	32,614	4,499
IOWA	32,588	28,189	3,533	866	20,407	18,743	1,345	319
KANSAS	31,310	14,769	14,059	2,482	20,050	11,217	7,706	1,127
MINNESOTA	54,577	24,229	27,975	2,373	31,395	16,334	14,252	809
MISSOURI	65,555	53,808	7,003	4,744	41,947	36,545	3,444	1,958
NEBRASKA	18,360	12,989	5,083	288	7,417	4,261	3,149	7
NORTH DAKOTA	6,701	1,408	5,291	2	2,541	1,031	1,508	2
SOUTH DAKOTA	6,821	2,633	3,328	860	3,010	1,523	1,210	277
SOUTH ATLANTIC	360,896	228,495	101,208	31,193	235,885	154,344	58,095	23,446
DELAWARE	5,760	4,608	922	230	3,500	3,010	350	140
DISTRICT OF COLUMBIA	29,489	16,579	8,871	4,039	23,755	12,326	7,992	3,437
FLORIDA	71,225	49,264	17,458	4,503	41,600	29,887	9,598	2,115
GEORGIA	50,602	20,580	28,227	1,795	24,171	10,205	13,263	703
MARYLAND	70,843	46,305	11,549	12,989	54,959	32,276	10,001	12,682
NORTH CAROLINA	79,847	57,809	16,704	5,334	56,759	44,970	8,613	3,176
SOUTH CAROLINA	11,113	6,479	4,108	526	4,922	3,261	1,467	194
VIRGINIA	35,003	22,229	11,347	1,427	21,334	15,125	5,453	756
WEST VIRGINIA	7,014	4,642	2,022	350	4,885	3,284	1,358	243
EAST SOUTH CENTRAL	94,073	49,584	37,698	6,791	64,301	33,922	27,145	3,234
ALABAMA	26,357	10,280	14,978	1,099	19,189	6,187	12,499	503
KENTUCKY	17,176	9,170	4,338	3,668	9,204	4,669	2,828	1,707
MISSISSIPPI	19,055	9,201	8,551	1,303	9,060	4,789	3,636	635
TENNESSEE	31,485	20,933	9,831	721	26,848	18,277	8,182	389
WEST SOUTH CENTRAL	202,450	151,219	44,295	6,936	114,283	87,621	22,009	4,653
ARKANSAS	10,241	6,784	3,151	306	4,825	3,526	1,187	112
LOUISIANA	34,468	27,757	6,034	677	16,213	13,678	2,108	427
OKLAHOMA	20,030	12,640	5,822	1,568	11,186	7,626	2,605	955
TEXAS	137,711	104,038	29,288	4,385	82,059	62,791	16,109	3,159
MOUNTAIN	179,041	105,471	57,126	16,444	122,873	72,776	38,152	11,945
ARIZONA	30,321	20,715	6,827	2,779	15,818	10,435	3,222	2,161
COLORADO	63,997	35,982	24,574	3,441	50,161	27,435	20,047	2,679
IDAHO	8,727	3,151	2,662	2,914	3,868	1,247	1,042	1,579
MONTANA	8,654	5,927	2,526	201	3,365	2,650	690	25
NEVADA	6,449	2,845	2,487	1,117	3,560	1,578	1,550	432
NEW MEXICO	18,211	10,420	4,265	3,526	14,148	8,098	3,055	2,995
UTAH	36,004	23,025	11,314	1,665	27,422	17,935	8,184	1,303
WYOMING	6,678	3,406	2,471	801	4,531	3,398	362	771
PACIFIC	528,609	367,425	141,171	20,013	411,703	292,371	106,118	13,214
ALASKA	16,560	5,465	11,095	0	11,822	2,956	8,866	0
CALIFORNIA	380,906	276,033	90,671	14,202	307,417	227,657	69,596	10,164
HAWAII	26,859	16,921	7,789	2,149	16,136	9,036	5,648	1,452
OREGON	34,768	21,959	11,370	1,439	24,007	17,067	6,379	561
WASHINGTON	69,516	47,047	20,246	2,223	52,321	35,655	15,629	1,037
OTHER	7,282	6,041	1,039	202	5,737	5,111	614	12

GEOGRAPHIC DISTRIBUTION OF FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, FOR SELECTED YEARS, FY 1964-73

TABLE B-12.

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	1964	1966	1968	1970	1972	1973
UNITED STATES, TOTAL	$ 917,322	1,261,034	1,572,064	1,647,500	1,838,446	2,044,358
NEW ENGLAND	118,600	182,304	223,491	235,027	257,913	282,957
CONNECTICUT	21,258	25,562	30,797	39,578	38,348	38,913
MAINE	1,507	1,107	1,385	1,567	3,211	4,423
MASSACHUSETTS	81,443	136,518	171,320	173,829	190,984	211,429
NEW HAMPSHIRE	4,434	6,312	5,823	7,493	6,648	7,347
RHODE ISLAND	7,702	10,059	10,920	8,699	13,924	16,036
VERMONT	2,256	2,746	3,246	3,861	4,798	4,809
MIDDLE ATLANTIC	198,518	263,590	324,085	323,441	332,902	368,812
NEW JERSEY	23,437	29,043	34,135	31,311	27,286	30,139
NEW YORK	120,282	162,054	202,292	202,582	216,718	245,566
PENNSYLVANIA	54,799	72,493	87,658	89,548	88,898	93,107
EAST NORTH CENTRAL	172,334	226,644	261,838	265,824	278,586	311,040
ILLINOIS	59,265	72,423	83,762	77,250	83,156	92,662
INDIANA	19,306	29,952	33,716	33,375	35,078	40,624
MICHIGAN	42,505	54,893	61,439	65,018	67,566	71,147
OHIO	29,023	36,458	47,465	50,310	49,981	54,830
WISCONSIN	22,235	32,918	35,456	39,871	42,805	51,777
WEST NORTH CENTRAL	57,846	78,341	107,004	118,856	123,535	126,767
IOWA	11,220	13,130	15,206	17,166	17,753	20,407
KANSAS	7,557	10,520	16,639	18,053	17,450	20,050
MINNESOTA	17,090	21,985	27,161	27,848	28,530	31,395
MISSOURI	14,944	23,517	36,701	43,682	46,972	41,947
NEBRASKA	2,997	4,365	5,809	6,625	7,171	7,417
NORTH DAKOTA	1,888	1,419	1,572	1,839	2,121	2,541
SOUTH DAKOTA	2,150	3,405	3,916	3,643	3,538	3,010
SOUTH ATLANTIC	99,208	137,494	178,038	190,141	209,314	235,885
DELAWARE	1,566	1,847	2,203	2,914	3,177	3,500
DISTRICT OF COLUMBIA	11,241	16,432	18,158	20,629	21,602	23,755
FLORIDA	15,775	20,602	28,441	28,634	37,155	41,600
GEORGIA	9,911	16,074	20,843	25,231	23,020	24,171
MARYLAND	28,712	35,114	42,611	42,044	47,892	54,959
NORTH CAROLINA	18,169	27,844	42,737	42,403	46,950	56,759
SOUTH CAROLINA	2,640	3,642	3,835	4,631	4,883	4,922
VIRGINIA	9,273	12,122	13,176	17,832	18,287	21,334
WEST VIRGINIA	1,921	3,817	6,034	5,823	6,348	4,885
EAST SOUTH CENTRAL	28,623	37,599	47,019	55,644	52,148	64,301
ALABAMA	6,868	8,286	12,087	13,385	14,919	19,189
KENTUCKY	4,833	7,145	8,756	9,996	8,387	9,204
MISSISSIPPI	3,958	5,630	6,923	9,144	7,919	9,060
TENNESSEE	12,964	16,538	19,253	23,119	20,923	26,848
WEST SOUTH CENTRAL	49,838	71,432	95,076	96,446	105,821	114,233
ARKANSAS	3,358	4,872	5,425	4,609	4,394	4,825
LOUISIANA	11,681	14,604	19,802	21,248	12,870	16,213
OKLAHOMA	6,603	8,208	12,475	8,747	10,641	11,186
TEXAS	28,196	43,748	57,374	61,842	77,916	82,059
MOUNTAIN	47,039	62,043	76,696	96,822	115,526	122,873

MIDDLE ATLANTIC	198,518	263,590	324,085	323,441	332,902	368,812
NEW JERSEY	23,437	29,043	34,135	31,311	27,286	30,139
NEW YORK	120,282	162,054	202,292	202,582	216,718	245,566
PENNSYLVANIA	54,799	72,493	87,658	89,548	88,898	93,107
EAST NORTH CENTRAL	172,334	226,644	261,838	265,824	278,586	311,040
ILLINOIS	59,265	72,423	83,762	77,250	83,156	92,662
INDIANA	19,306	29,952	33,716	33,375	35,078	40,624
MICHIGAN	42,505	54,893	61,439	65,018	67,566	71,147
OHIO	29,023	36,458	47,465	50,310	49,981	54,830
WISCONSIN	22,235	32,918	35,456	39,871	42,805	51,777
WEST NORTH CENTRAL	57,846	78,341	107,004	118,856	123,535	126,767
IOWA	11,220	13,130	15,206	17,166	17,753	20,407
KANSAS	7,557	10,520	16,639	18,053	17,450	20,050
MINNESOTA	17,090	21,985	27,161	27,848	28,530	31,395
MISSOURI	14,944	23,517	36,701	43,682	46,972	41,947
NEBRASKA	2,997	4,365	5,809	6,625	7,171	7,417
NORTH DAKOTA	1,888	1,419	1,572	1,839	2,121	2,541
SOUTH DAKOTA	2,150	3,405	3,916	3,643	3,538	3,010
SOUTH ATLANTIC	99,208	137,494	178,038	190,141	209,314	235,885
DELAWARE	1,566	1,847	2,203	2,914	3,177	3,500
DISTRICT OF COLUMBIA	11,241	16,432	18,158	20,629	21,602	23,755
FLORIDA	15,775	20,602	28,441	28,634	37,155	41,600
GEORGIA	9,911	16,074	20,843	25,231	23,020	24,171
MARYLAND	28,712	35,114	42,611	42,044	47,892	54,559
NORTH CAROLINA	18,169	27,844	42,737	42,403	46,950	56,759
SOUTH CAROLINA	2,640	3,642	3,835	4,631	4,883	4,922
VIRGINIA	9,273	12,122	13,176	17,832	18,287	21,334
WEST VIRGINIA	1,921	3,817	6,034	5,823	6,348	4,885
EAST SOUTH CENTRAL	28,623	37,599	47,019	55,644	52,148	64,301
ALABAMA	6,868	8,286	12,087	13,385	14,919	19,189
KENTUCKY	4,833	7,145	8,756	9,996	8,387	9,204
MISSISSIPPI	3,958	5,630	6,923	9,144	7,919	9,060
TENNESSEE	12,964	16,538	19,253	23,119	20,923	26,848
WEST SOUTH CENTRAL	49,838	71,432	95,076	96,446	105,821	114,283
ARKANSAS	3,358	4,872	5,425	4,609	4,394	4,825
LOUISIANA	11,681	14,604	19,802	21,248	12,870	16,213
OKLAHOMA	6,603	8,208	12,475	8,747	10,641	11,186
TEXAS	28,196	43,748	57,374	61,842	77,916	82,059
MOUNTAIN	47,039	62,043	76,696	96,822	115,526	122,873
ARIZONA	6,638	8,443	7,345	9,534	11,950	15,818
COLORADO	15,863	20,653	29,914	41,027	48,085	50,161
IDAHO	1,486	1,898	1,899	2,801	3,701	3,868
MONTANA	1,621	2,478	3,722	4,656	3,060	3,365
NEVADA	1,150	2,137	2,860	2,860	3,310	3,560
NEW MEXICO	11,449	12,497	14,926	16,885	18,315	14,148
UTAH	7,833	12,209	13,336	15,656	23,595	27,422
WYOMING	999	1,728	2,694	3,403	3,510	4,531
PACIFIC	141,839	198,030	254,587	260,784	357,128	411,703
ALASKA	2,299	5,027	5,596	5,938	11,207	11,822
CALIFORNIA	108,270	151,613	193,368	189,464	265,026	307,417
HAWAII	4,177	5,615	6,697	10,413	13,933	16,136
OREGON	10,775	14,010	18,152	21,789	21,902	24,007
WASHINGTON	16,318	21,765	30,774	33,180	45,060	52,321
OTHER	3,477	3,557	4,230	4,515	5,573	5,737

TABLE B-13.

GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
UNITED STATES, TOTAL	2,933,552	2,044,358	270,850	14,386	131,757	86,385	317,396	68,420
NEW ENGLAND	339,303	282,957	4,966	640	16,252	8,425	16,938	9,125
CONNECTICUT	53,586	38,913	693	49	3,799	277	8,958	897
MAINE	6,688	4,423	348	10	112	254	1,536	5
MASSACHUSETTS	244,957	211,429	2,196	425	11,455	7,559	4,272	7,621
NEW HAMPSHIRE	8,835	7,347	436	0	221	57	479	295
RHODE ISLAND	17,965	16,036	551	156	440	119	520	143
VERMONT	7,272	4,809	742	0	225	159	1,173	164
MIDDLE ATLANTIC	530,883	368,812	29,559	4,397	35,841	17,927	61,265	13,082
NEW JERSEY	50,149	30,139	5,779	372	1,521	1,932	9,579	827
NEW YORK	347,794	245,566	18,567	3,574	27,274	8,995	35,107	8,711
PENNSYLVANIA	132,940	93,107	5,213	451	7,046	7,000	16,579	3,544
EAST NORTH CENTRAL	475,103	311,040	44,601	3,017	22,032	16,359	61,280	16,774
ILLINOIS	131,264	92,662	6,226	1,262	6,669	1,471	15,602	7,372
INDIANA	56,681	40,624	4,824	591	1,183	1,934	7,267	258
MICHIGAN	112,453	71,147	9,228	389	6,390	6,532	16,208	2,559
OHIO	77,180	54,830	6,734	733	4,107	3,442	3,594	3,740
WISCONSIN	97,525	51,777	17,589	42	3,683	2,980	18,609	2,845
WEST NORTH CENTRAL	215,912	126,767	33,220	522	6,142	5,699	37,667	5,895
IOWA	32,588	20,407	4,597	147	381	952	5,468	636
KANSAS	31,310	20,050	5,257	282	552	789	4,136	244
MINNESOTA	54,577	31,395	4,990	0	3,181	1,398	11,289	2,324
MISSOURI	65,555	41,947	6,661	19	1,440	1,606	12,484	1,398
NEBRASKA	18,360	7,417	6,306	36	438	482	3,601	80
NORTH DAKOTA	6,701	2,541	2,857	0	85	272	91	855
SOUTH DAKOTA	6,821	3,010	2,552	38	65	200	598	358
SOUTH ATLANTIC	360,896	235,885	52,441	946	12,956	11,655	37,579	9,434
DELAWARE	5,760	3,500	631	0	498	219	872	40
DISTRICT OF COLUMBIA	29,489	23,755	56	81	1,486	341	2,165	1,605
FLORIDA	71,225	41,600	1,701	222	2,787	2,090	20,892	1,933
GEORGIA	50,602	24,171	15,792	406	914	2,224	6,352	743
MARYLAND	70,843	54,959	7,457	24	2,277	2,423	2,145	1,558
NORTH CAROLINA	79,847	56,759	13,551	138	2,949	2,213	2,003	2,234
SOUTH CAROLINA	11,113	4,922	4,830	12	655	396	186	112
VIRGINIA	35,003	21,334	6,789	63	1,337	1,620	2,893	967
WEST VIRGINIA	7,014	4,885	1,634	0	53	129	71	242
EAST SOUTH CENTRAL	94,073	64,301	10,811	689	2,827	2,719	11,795	931
ALABAMA	26,357	19,189	3,838	46	384	736	1,963	201
KENTUCKY	17,176	9,204	1,810	142	657	400	4,872	91
MISSISSIPPI	19,055	9,060	4,627	380	662	720	3,492	114
TENNESSEE	31,485	26,848	536	121	1,124	863	1,468	525
WEST SOUTH CENTRAL	202,450	114,283	38,551	263	11,187	7,729	24,468	5,969
ARKANSAS	10,241	4,825	4,372	0	112	346	463	123
LOUISIANA	34,468	16,213	1,445	1	1,991	1,579	12,248	991
OKLAHOMA	20,030	11,186	5,228	6	189	450	1,910	1,061
TEXAS	137,711	82,059	27,506	256	8,895	5,354	9,847	3,794
MOUNTAIN	179,041	122,873	25,433	2,442	4,537	9,573	11,696	2,487
ARIZONA	30,321	15,818	7,544	95	854	924	4,015	1,071

VERMONT	7,272	4,809	742	0	225	159	1,173	164
MIDDLE ATLANTIC	530,883	368,812	29,559	4,397	35,841	17,927	61,265	13,082
NEW JERSEY	50,149	30,139	5,779	372	1,521	1,932	9,579	827
NEW YORK	347,794	245,566	18,567	3,574	27,274	8,995	35,107	8,711
PENNSYLVANIA	132,940	93,107	5,213	451	7,046	7,000	16,579	3,544
EAST NORTH CENTRAL	475,103	311,040	44,601	3,017	22,032	16,359	61,280	16,774
ILLINOIS	131,264	92,662	6,226	1,262	6,669	1,471	15,602	7,372
INDIANA	56,681	40,624	4,824	591	1,183	1,934	7,267	258
MICHIGAN	112,453	71,147	9,228	389	6,390	6,532	16,208	2,559
OHIO	77,180	54,830	6,734	733	4,107	3,442	3,594	3,740
WISCONSIN	97,525	51,777	17,589	42	3,683	2,980	18,609	2,845
WEST NORTH CENTRAL	215,912	126,767	33,220	522	6,142	5,699	37,667	5,895
IOWA	32,588	20,407	4,597	147	381	952	5,468	636
KANSAS	31,310	20,050	5,257	282	552	749	4,136	244
MINNESOTA	54,577	31,395	4,990	0	3,181	1,398	11,289	2,324
MISSOURI	65,555	41,947	6,661	19	1,440	1,606	12,484	1,398
NEBRASKA	18,360	7,417	6,306	36	438	482	3,601	80
NORTH DAKOTA	6,701	2,541	2,857	0	85	272	91	855
SOUTH DAKOTA	6,821	3,010	2,552	38	65	200	598	358
SOUTH ATLANTIC	360,896	235,885	52,441	946	12,956	11,655	37,579	9,434
DELAWARE	5,760	3,500	631	0	498	219	872	40
DISTRICT OF COLUMBIA	29,489	23,755	56	81	1,486	341	2,165	1,605
FLORIDA	71,225	41,600	1,701	222	2,787	2,090	20,892	1,933
GEORGIA	50,602	24,171	15,792	406	914	2,224	6,352	743
MARYLAND	70,843	54,959	7,457	24	2,277	2,423	2,145	1,558
NORTH CAROLINA	79,647	56,759	13,551	138	2,949	2,213	2,003	2,234
SOUTH CAROLINA	11,113	4,922	4,830	12	655	396	186	112
VIRGINIA	35,003	21,334	6,789	63	1,337	1,620	2,893	967
WEST VIRGINIA	7,014	4,885	1,634	0	53	129	71	242
EAST SOUTH CENTRAL	94,073	64,301	10,811	689	2,827	2,719	11,795	931
ALABAMA	26,357	19,189	3,838	46	384	736	1,963	201
KENTUCKY	17,176	9,204	1,810	142	657	400	4,872	91
MISSISSIPPI	19,055	9,060	4,627	380	662	720	3,492	114
TENNESSEE	31,485	26,848	536	121	1,124	863	1,468	525
WEST SOUTH CENTRAL	202,450	114,283	38,551	263	11,187	7,729	24,468	5,969
ARKANSAS	10,241	4,825	4,372	0	112	346	463	123
LOUISIANA	34,468	16,213	1,445	1	1,991	1,579	12,248	991
OKLAHOMA	20,030	11,186	5,228	6	189	450	1,910	1,061
TEXAS	137,711	82,059	27,506	256	8,895	5,354	9,847	3,794
MOUNTAIN	179,041	122,873	25,433	2,442	4,537	9,573	11,696	2,487
ARIZONA	30,321	15,818	7,544	95	854	924	4,015	1,071
COLORADO	63,997	50,161	4,850	486	2,191	5,033	743	533
IDAHO	8,727	3,868	3,664	11	28	432	724	0
MONTANA	8,654	3,365	2,742	0	112	801	1,584	50
NEVADA	6,449	3,560	1,292	42	140	439	922	54
NEW MEXICO	18,211	14,148	1,509	13	185	654	1,203	499
UTAH	36,004	27,422	2,534	1,124	986	1,153	2,505	280
WYOMING	6,678	4,531	1,298	671	41	137	0	0
PACIFIC	528,609	411,703	30,861	1,246	19,859	6,120	54,248	4,572
ALASKA	16,560	11,822	229	0	207	484	3,000	818
CALIFORNIA	380,906	307,417	5,079	629	16,852	3,272	46,183	1,474
HAWAII	26,859	16,136	9,907	130	363	65	55	203
OREGON	34,768	24,007	5,596	152	1,210	923	2,404	476
WASHINGTON	69,516	52,321	10,050	335	1,227	1,376	2,606	1,601
OUTLYING AREAS	7,282	5,737	407	224	124	179	460	151

TABLE B-14.

GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN PUBLIC UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
UNITED STATES, TOTAL	1,796,429	1,145,420	244,160	8,869	60,540	52,130	249,098	36,212
NEW ENGLAND	53,381	35,119	3,430	171	1,271	846	11,629	915
CONNECTICUT	16,474	7,711	182	47	532	94	7,481	427
MAINE	6,438	4,307	310	10	89	253	1,469	0
MASSACHUSETTS	10,570	8,028	1,245	14	237	308	737	1
NEW HAMPSHIRE	3,856	2,846	429	0	28	5	262	286
RHODE ISLAND	8,855	7,466	522	100	160	50	520	37
VERMONT	7,188	4,761	742	0	225	136	1,160	164
MIDDLE ATLANTIC	139,967	92,856	10,016	1,073	5,650	3,805	20,249	6,318
NEW JERSEY	25,955	13,341	5,430	73	697	189	5,470	755
NEW YORK	68,081	49,011	1,614	948	3,716	2,171	6,023	4,598
PENNSYLVANIA	45,931	30,504	2,972	52	1,237	1,445	8,756	965
EAST NORTH CENTRAL	356,662	221,390	42,537	2,088	13,351	12,739	54,815	9,742
ILLINOIS	53,119	34,650	4,435	560	1,209	762	10,452	1,051
INDIANA	51,932	36,431	4,816	576	903	1,754	7,215	237
MICHIGAN	111,993	71,000	9,226	389	6,267	6,381	16,183	2,547
OHIO	50,347	31,587	6,589	545	2,338	2,647	3,231	3,410
WISCONSIN	89,271	47,722	17,471	18	2,634	1,195	17,734	2,497
WEST NORTH CENTRAL	182,712	97,944	32,796	518	4,759	4,557	37,374	4,764
IOWA	32,073	20,103	4,594	147	309	919	5,393	608
KANSAS	31,277	20,021	5,257	282	551	789	4,134	243
MINNESOTA	53,701	30,923	4,990	0	3,102	1,269	11,215	2,202
MISSOURI	34,538	14,476	6,241	15	287	677	12,402	440
NEBRASKA	17,711	6,978	6,305	36	362	431	3,541	58
NORTH DAKOTA	6,701	2,541	2,857	0	85	272	91	855
SOUTH DAKOTA	6,711	2,902	2,552	38	63	200	598	358
SOUTH ATLANTIC	225,274	127,170	50,703	772	7,318	7,919	28,074	3,318
DELAWARE	5,760	3,500	631	0	498	219	872	40
DISTRICT OF COLUMBIA	205	205	0	0	0	0	0	0
FLORIDA	42,531	21,909	1,672	149	1,284	997	15,828	692
GEORGIA	42,268	16,928	15,792	406	463	1,877	6,279	523
MARYLAND	28,420	19,500	5,876	4	948	1,538	487	67
NORTH CAROLINA	53,824	34,230	13,480	138	2,181	1,546	1,509	740
SOUTH CAROLINA	10,975	4,862	4,830	12	590	396	173	112
VIRGINIA	34,331	21,192	6,789	63	1,306	1,218	2,859	904
WEST VIRGINIA	6,960	4,844	1,633	0	48	128	67	240
EAST SOUTH CENTRAL	73,381	46,126	10,745	641	1,908	2,391	10,792	778
ALABAMA	24,878	17,840	3,825	43	349	721	1,904	196
KENTUCKY	17,124	9,171	1,809	142	651	398	4,865	88
MISSISSIPPI	19,023	9,029	4,626	380	662	720	3,492	114
TENNESSEE	12,356	10,086	485	76	246	552	531	380
WEST SOUTH CENTRAL	162,947	84,187	38,069	140	7,151	6,291	22,488	4,621
ARKANSAS	10,185	4,775	4,372	0	112	346	457	123
LOUISIANA	21,953	8,163	1,193	0	637	796	11,110	54
OKLAHOMA	19,633	11,012	5,219	0	189	328	1,824	1,061
TEXAS	111,176	60,237	27,285	140	6,213	4,821	9,097	3,383

MAINE	6,930	4,307	310	10	89	253	1,469	0
MASSACHUSETTS	10,570	8,028	1,245	14	237	308	737	1
NEW HAMPSHIRE	3,856	2,846	429	0	28	5	262	286
RHODE ISLAND	8,855	7,466	522	100	160	50	520	37
VERMONT	7,188	4,761	742	0	225	136	1,160	164
MIDDLE ATLANTIC	139,967	92,856	10,016	1,073	5,650	3,805	20,249	6,318
NEW JERSEY	25,955	13,341	5,430	73	697	189	5,470	755
NEW YORK	68,081	49,011	1,614	948	3,716	2,171	6,023	4,598
PENNSYLVANIA	45,931	30,504	2,972	52	1,237	1,445	8,756	965
EAST NORTH CENTRAL	356,662	221,390	42,537	2,088	13,351	12,739	54,815	9,742
ILLINOIS	53,119	34,650	4,435	560	1,209	762	10,452	1,051
INDIANA	51,932	36,431	4,816	576	903	1,754	7,215	237
MICHIGAN	111,993	71,000	9,226	389	6,267	6,381	16,183	2,547
OHIO	50,347	31,587	6,589	545	2,338	2,647	3,231	3,410
WISCONSIN	89,271	47,722	17,471	18	2,634	1,195	17,734	2,497
WEST NORTH CENTRAL	182,712	97,944	32,796	518	4,759	4,557	37,374	4,764
IOWA	32,073	20,103	4,594	147	309	919	5,393	608
KANSAS	31,277	20,021	5,257	282	551	789	4,134	243
MINNESOTA	53,701	30,923	4,990	0	3,102	1,269	11,215	2,202
MISSOURI	34,538	14,476	6,241	15	287	677	12,402	440
NEBRASKA	17,711	6,978	6,305	36	362	431	3,541	58
NORTH DAKOTA	6,701	2,541	2,857	0	85	272	91	855
SOUTH DAKOTA	6,711	2,902	2,552	38	63	200	598	358
SOUTH ATLANTIC	225,274	127,170	50,703	772	7,318	7,919	28,074	3,318
DELAWARE	5,760	3,500	631	0	498	219	872	40
DISTRICT OF COLUMBIA	205	205	0	0	0	0	0	0
FLORIDA	42,531	21,909	1,672	149	1,284	997	15,828	692
GEORGIA	42,268	16,928	15,792	406	463	1,877	6,279	523
MARYLAND	28,420	19,500	5,876	4	948	1,538	487	67
NORTH CAROLINA	53,824	34,230	13,480	138	2,181	1,546	1,509	740
SOUTH CAROLINA	10,975	4,862	4,830	12	590	396	173	112
VIRGINIA	34,331	21,192	6,789	63	1,306	1,218	2,859	904
WEST VIRGINIA	6,960	4,844	1,633	0	48	128	67	240
EAST SOUTH CENTRAL	73,381	46,126	10,745	641	1,908	2,391	10,792	778
ALABAMA	24,878	17,840	3,825	43	349	721	1,904	196
KENTUCKY	17,124	9,171	1,809	142	651	398	4,865	88
MISSISSIPPI	19,023	9,029	4,626	380	662	720	3,492	114
TENNESSEE	12,356	10,086	485	76	246	552	531	380
WEST SOUTH CENTRAL	162,947	84,187	38,069	140	7,151	6,291	22,488	4,621
ARKANSAS	10,185	4,775	4,372	0	112	346	457	123
LOUISIANA	21,953	8,163	1,193	0	637	796	11,110	54
OKLAHOMA	19,633	11,012	5,219	0	189	328	1,824	1,061
TEXAS	111,176	60,237	27,285	140	6,213	4,821	9,097	3,383
MOUNTAIN	169,643	116,002	24,813	2,371	4,246	8,626	11,185	2,400
ARIZONA	30,321	15,818	7,544	95	854	924	4,015	1,071
COLORADO	57,338	44,691	4,614	431	2,066	4,391	652	493
IDAHO	8,727	3,868	3,664	11	28	432	724	0
MONTANA	8,654	3,365	2,742	0	112	801	1,584	50
NEVADA	6,449	3,560	1,292	42	140	439	922	54
NEW MEXICO	18,170	14,115	1,508	13	182	653	1,201	498
UTAH	33,306	26,054	2,151	1,108	823	849	2,087	234
WYOMING	6,678	4,531	1,298	671	41	137	0	0
PACIFIC	425,180	318,889	30,644	871	14,762	4,777	52,032	3,205
ALASKA	16,560	11,822	229	0	207	484	3,000	818
CALIFORNIA	278,425	215,324	4,875	254	11,851	1,969	44,007	145
HAWAII	26,859	16,136	9,907	130	363	65	55	203
OREGON	34,015	23,370	5,596	152	1,171	894	2,377	455
WASHINGTON	69,321	52,237	10,037	335	1,170	1,365	2,593	1,584
OTHER	7,282	5,737	407	224	124	179	460	151

TABLE B-15.

GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN PRIVATE UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
UNITED STATES, TOTAL	1,137,123	898,938	26,690	5,517	71,217	34,255	68,298	32,208
NEW ENGLAND	285,922	247,838	1,536	469	14,981	7,579	5,309	8,210
CONNECTICUT	37,112	31,202	511	2	3,267	183	1,477	470
MAINE	250	116	38	0	23	1	67	5
MASSACHUSETTS	234,387	203,401	951	411	11,218	7,251	3,535	7,620
NEW HAMPSHIRE	4,979	4,501	7	0	193	52	217	9
RHODE ISLAND	9,110	8,570	29	56	280	69	0	106
VERMONT	84	48	0	0	0	23	13	0
MIDDLE ATLANTIC	390,916	275,956	19,543	3,324	30,191	14,122	41,016	6,764
NEW JERSEY	24,194	16,798	349	299	824	1,743	4,109	72
NEW YORK	279,713	196,555	16,953	2,626	23,558	6,824	29,084	4,113
PENNSYLVANIA	87,009	62,603	2,241	399	5,809	5,555	7,823	2,579
EAST NORTH CENTRAL	118,441	89,650	2,064	929	8,681	3,620	6,465	7,032
ILLINOIS	78,145	58,012	1,791	702	5,460	709	5,150	6,321
INDIANA	4,749	4,193	8	15	280	180	52	21
MICHIGAN	460	147	2	0	123	151	25	12
OHIO	26,833	23,243	145	188	1,769	795	363	330
WISCONSIN	8,254	4,055	118	24	1,049	1,785	875	348
WEST NORTH CENTRAL	33,200	28,823	424	4	1,383	1,142	293	1,131
IOWA	515	304	3	0	72	33	75	28
KANSAS	33	29	0	0	1	0	2	1
MINNESOTA	876	472	0	0	79	129	74	122
MISSOURI	31,017	27,471	420	4	1,153	929	82	958
NEBRASKA	649	439	1	0	76	51	60	22
NORTH DAKOTA	0	0	0	0	0	0	0	0
SOUTH DAKOTA	110	108	0	0	2	0	0	0
SOUTH ATLANTIC	135,622	108,715	1,738	174	5,638	3,736	9,505	6,116
DELAWARE	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	29,284	23,550	56	81	1,486	341	2,165	1,605
FLORIDA	28,694	19,691	29	73	1,503	1,093	5,064	1,241
GEORGIA	8,334	7,243	0	0	451	347	73	220
MARYLAND	42,423	35,459	1,581	20	1,329	885	1,658	1,491
NORTH CAROLINA	26,023	22,529	71	0	768	667	494	1,494
SOUTH CAROLINA	138	60	0	0	65	0	13	0
VIRGINIA	672	142	0	0	31	402	34	63
WEST VIRGINIA	54	41	1	0	5	1	4	2
EAST SOUTH CENTRAL	20,692	18,175	66	48	919	328	1,003	153
ALABAMA	1,479	1,349	13	3	35	15	59	5
KENTUCKY	52	33	1	0	6	2	7	3
MISSISSIPPI	32	31	1	0	0	0	0	0
TENNESSEE	19,129	16,762	51	45	878	311	937	145
WEST SOUTH CENTRAL	39,503	30,096	482	123	4,036	1,438	1,980	1,348
ARKANSAS	56	50	0	0	0	0	6	0
LOUISIANA	12,515	8,050	252	1	1,354	783	1,138	937
OKLAHOMA	397	174	9	6	0	122	86	0
TEXAS	26,535	21,822	221	116	2,682	533	750	411
MOUNTAIN	9,398	6,871	620	71	291	947	511	87
ARIZONA	0	0	0	0	0	0	0	0
COLORADO	6,659	5,470	236	55	125	682	91	80

VERMONT	84	48	0	0	0	23	13	0
MIDDLE ATLANTIC	390,916	275,956	19,543	3,324	30,191	14,122	41,016	6,764
NEW JERSEY	24,194	16,798	349	299	824	1,743	4,109	72
NEW YORK	279,713	196,555	16,953	2,626	23,558	6,824	29,084	4,113
PENNSYLVANIA	87,009	62,603	2,241	399	5,809	5,555	7,823	2,579
EAST NORTH CENTRAL	118,441	89,650	2,064	929	8,681	3,620	6,465	7,032
ILLINOIS	78,145	58,012	1,791	702	5,460	709	5,150	6,321
INDIANA	4,749	4,193	8	15	280	180	52	21
MICHIGAN	460	147	2	0	123	151	25	12
OHIO	26,833	23,243	145	188	1,769	795	363	330
WISCONSIN	8,254	4,055	118	24	1,049	1,785	875	348
WEST NORTH CENTRAL	33,200	28,823	424	4	1,383	1,142	293	1,131
IOWA	515	304	3	0	72	33	75	28
KANSAS	33	29	0	0	1	0	2	1
MINNESOTA	876	472	0	0	79	129	74	122
MISSOURI	31,017	27,471	420	4	1,153	929	82	958
NEBRASKA	649	439	1	0	76	51	60	22
NORTH DAKOTA	0	0	0	0	0	0	0	0
SOUTH DAKOTA	110	108	0	0	2	0	0	0
SOUTH ATLANTIC	135,622	108,715	1,738	174	5,638	3,736	9,505	6,116
DELAWARE	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	29,284	23,550	56	81	1,486	341	2,165	1,605
FLORIDA	28,694	19,691	29	73	1,503	1,093	5,064	1,241
GEORGIA	8,334	7,243	0	0	451	347	73	220
MARYLAND	42,423	35,459	1,581	20	1,329	885	1,658	1,491
NORTH CAROLINA	26,023	22,529	71	0	768	667	498	1,494
SOUTH CAROLINA	138	60	0	0	65	0	13	0
VIRGINIA	672	142	0	0	31	402	34	63
WEST VIRGINIA	54	41	1	0	5	1	4	2
EAST SOUTH CENTRAL	20,692	18,175	66	48	919	328	1,003	153
ALABAMA	1,479	1,349	13	3	35	15	59	5
KENTUCKY	52	33	1	0	6	2	7	3
MISSISSIPPI	32	31	1	0	0	0	0	0
TENNESSEE	19,129	16,762	51	45	878	311	937	145
WEST SOUTH CENTRAL	39,503	30,096	482	123	4,036	1,438	1,980	1,348
ARKANSAS	56	50	0	0	0	0	6	0
LOUISIANA	12,515	8,050	252	1	1,354	783	1,138	937
OKLAHOMA	397	174	9	6	0	122	86	0
TEXAS	26,535	21,822	221	116	2,682	533	750	411
MOUNTAIN	9,398	6,871	620	71	291	947	511	87
ARIZONA	0	0	0	0	0	0	0	0
COLORADO	6,659	5,470	236	55	125	642	91	40
IDAHO	0	0	0	0	0	0	0	0
MONTANA	0	0	0	0	0	0	0	0
NEVADA	0	0	0	0	0	0	0	0
NEW MEXICO	41	33	1	0	3	1	2	1
UTAH	2,698	1,368	383	16	163	304	418	46
WYOMING	0	0	0	0	0	0	0	0
PACIFIC	103,429	92,814	217	375	5,097	1,343	2,216	1,367
ALASKA	0	0	0	0	0	0	0	0
CALIFORNIA	102,481	92,093	204	375	5,001	1,303	2,176	1,329
HAWAII	0	0	0	0	0	0	0	0
OREGON	753	637	0	0	39	29	27	21
WASHINGTON	195	84	13	0	57	11	13	17
OTHER	0	0	0	0	0	0	0	0

TABLE B-16. GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES, BY FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	2,933,552	384,452	340,954	200,376	74,683	1,517,994	74,376	235,607	105,110
NEW ENGLAND	339,303	90,136	48,045	27,612	14,334	119,648	7,219	27,999	4,310
CONNECTICUT	53,586	3,204	6,149	1,976	1,439	34,670	1,988	4,058	102
MAINE	6,688	333	287	1,787	2	3,286	103	889	1
MASSACHUSETTS	244,957	81,601	36,772	22,681	10,953	65,299	3,463	20,700	3,488
NEW HAMPSHIRE	8,835	1,317	1,196	487	206	4,850	395	215	169
RHODE ISLAND	17,965	3,595	3,402	546	1,727	5,642	847	1,785	421
VERMONT	7,272	86	239	135	7	5,901	423	352	129
MIDDLE ATLANTIC	530,883	52,919	65,048	24,039	14,418	293,686	15,001	39,094	26,678
NEW JERSEY	50,149	6,909	10,908	3,013	2,035	15,548	2,210	6,592	934
NEW YORK	347,794	29,097	35,303	15,943	9,106	211,499	10,073	19,536	17,237
PENNSYLVANIA	132,940	14,913	18,837	5,083	3,277	66,639	2,718	12,966	8,507
EAST NORTH CENTRAL	475,103	66,356	55,830	25,172	14,387	217,830	15,586	59,438	20,504
ILLINOIS	131,264	14,099	18,592	5,058	5,622	68,126	3,146	11,090	5,531
INDIANA	56,681	7,691	9,146	452	1,603	25,620	1,064	8,846	2,259
MICHIGAN	112,453	21,654	7,333	5,986	2,289	49,249	5,726	18,870	3,346
OHIO	77,180	17,351	8,801	2,401	1,430	37,487	1,174	6,720	1,816
WISCONSIN	97,525	5,561	11,958	13,275	3,443	37,348	4,476	13,912	7,552
WEST NORTH CENTRAL	215,912	21,709	14,052	7,462	3,447	140,850	4,724	14,648	9,020
IOWA	32,588	3,542	4,639	159	1,294	19,307	336	3,174	137
KANSAS	31,310	3,077	1,577	2,391	594	17,701	2,540	2,938	492
MINNESOTA	54,577	4,774	4,114	972	934	34,202	1,088	5,330	3,167
MISSOURI	65,555	8,322	2,761	1,124	462	45,909	535	1,856	6,586
NEBRASKA	18,360	1,119	740	1,320	132	14,213	51	778	7
NORTH DAKOTA	6,701	297	149	396	1	5,775	2	61	0
SOUTH DAKOTA	6,821	578	72	1,100	30	3,743	176	491	631
SOUTH ATLANTIC	360,896	39,915	33,993	16,497	8,015	213,595	6,744	27,546	14,591
DELAWARE	5,760	1,438	927	1,392	51	1,329	238	394	0
DISTRICT OF COLUMBIA	29,489	3,355	2,550	178	839	14,521	1,044	5,228	1,774
FLORIDA	71,225	6,946	6,936	6,573	1,510	40,959	1,884	6,156	261
GEORGIA	50,602	8,380	5,551	270	1,316	26,547	1,127	7,194	217
MARYLAND	70,843	4,366	9,141	5,492	2,175	46,229	738	1,990	712
NORTH CAROLINA	79,847	6,389	3,791	1,030	1,227	52,530	1,155	4,295	9,430
SOUTH CAROLINA	11,113	830	429	473	99	7,615	154	1,071	442
VIRGINIA	35,003	6,177	4,577	1,078	796	19,413	348	867	1,751
WEST VIRGINIA	7,014	2,034	91	11	2	4,461	60	351	4
EAST SOUTH CENTRAL	94,073	7,812	4,255	1,913	356	66,228	4,817	6,029	2,667
ALABAMA	26,357	2,750	1,082	1,320	63	18,752	986	1,166	238
KENTUCKY	17,176	1,190	696	301	76	10,812	531	2,088	1,482
MISSISSIPPI	19,055	1,198	964	189	93	15,021	190	1,399	1
TENNESSEE	31,485	2,674	1,513	103	124	21,639	3,110	1,376	946
WEST SOUTH CENTRAL	202,450	23,692	21,886	10,305	4,615	114,213	4,310	11,358	12,071
ARKANSAS	10,241	486	329	933	7	7,682	13	759	32
LOUISIANA	34,468	1,798	2,583	2,033	947	25,002	594	1,035	476
OKLAHOMA	20,030	2,956	731	555	427	10,455	249	877	3,780
TEXAS	137,711	18,452	18,243	6,784	3,234	71,074	3,454	8,687	7,783
MOUNTAIN	139,081	27,573	28,758	15,580	8,285	72,904	5,322	13,886	8,817

RHODE ISLAND	17,965	3,595	3,402	546	1,727	5,642	847	1,785	421
VERMONT	7,272	86	239	135	7	5,901	423	352	129
MIDDLE ATLANTIC	530,883	52,919	65,048	24,039	14,418	293,686	15,001	39,094	26,678
NEW JERSEY	50,149	6,909	10,908	3,013	2,035	15,548	2,210	6,592	934
NEW YORK	347,794	29,097	35,303	15,943	9,106	211,499	10,073	19,536	17,237
PENNSYLVANIA	132,940	16,913	18,837	5,083	3,277	66,639	2,718	12,966	8,507
EAST NORTH CENTRAL	475,103	66,356	55,830	25,172	14,387	217,830	15,586	59,438	20,504
ILLINOIS	131,264	14,099	18,592	5,058	5,622	68,126	3,146	11,090	5,531
INDIANA	56,681	7,691	9,146	452	1,603	25,620	1,064	8,846	2,259
MICHIGAN	112,453	21,654	7,333	3,986	2,289	49,249	5,726	18,870	3,346
OHIO	77,180	17,351	8,801	2,401	1,430	37,487	1,174	6,720	1,816
WISCONSIN	97,525	5,561	11,958	13,275	3,443	37,348	4,476	13,912	7,552
WEST NORTH CENTRAL	215,912	21,709	14,052	7,462	3,447	140,850	4,724	14,648	9,020
IOWA	32,588	3,542	4,639	159	1,294	19,307	336	3,174	137
KANSAS	31,310	3,077	1,577	2,391	594	17,701	2,540	2,938	492
MINNESOTA	54,577	4,774	4,114	972	934	34,202	1,084	5,330	3,167
MISSOURI	65,555	8,322	2,761	1,124	462	45,909	535	1,856	4,586
NEBRASKA	18,360	1,119	740	1,320	132	14,213	51	778	7
NORTH DAKOTA	6,701	297	149	396	1	5,775	2	81	0
SOUTH DAKOTA	6,821	578	72	1,100	30	3,743	176	491	631
SOUTH ATLANTIC	360,896	39,915	33,993	16,497	8,015	213,595	6,744	27,546	14,591
DELAWARE	5,760	1,438	927	1,392	51	1,320	238	394	0
DISTRICT OF COLUMBIA	29,489	3,355	2,550	178	839	14,521	1,044	5,228	1,774
FLORIDA	71,225	6,946	6,936	6,573	1,510	40,959	1,884	6,156	261
GEORGIA	50,602	8,380	5,551	270	1,316	26,547	1,127	7,194	217
MARYLAND	70,843	4,366	9,141	5,492	2,175	46,229	738	1,990	712
NORTH CAROLINA	79,847	6,389	3,791	1,030	1,227	52,530	1,155	4,295	9,430
SOUTH CAROLINA	11,113	830	429	473	99	7,615	154	1,071	442
VIRGINIA	35,003	6,177	4,577	1,078	796	19,413	344	867	1,751
WEST VIRGINIA	7,014	2,034	91	11	2	4,461	60	351	4
EAST SOUTH CENTRAL	94,073	7,812	4,255	1,913	356	66,224	4,817	6,029	2,667
ALABAMA	26,357	2,150	1,082	1,320	63	18,752	986	1,166	238
KENTUCKY	17,176	1,190	696	301	76	10,812	531	2,088	1,482
MISSISSIPPI	19,055	1,198	964	189	93	15,021	190	1,399	1
TENNESSEE	31,485	2,674	1,513	103	124	21,639	3,110	1,376	946
WEST SOUTH CENTRAL	202,450	23,692	21,886	10,305	4,615	114,213	4,310	11,358	12,071
ARKANSAS	10,241	486	329	933	7	7,682	13	759	32
LOUISIANA	34,468	1,798	2,583	2,033	947	25,002	594	1,035	476
OKLAHOMA	20,030	2,956	731	555	427	10,455	249	877	3,780
TEXAS	137,711	18,452	18,243	6,784	3,234	71,074	3,454	8,687	7,783
MOUNTAIN	179,041	27,573	28,754	15,540	4,245	72,904	5,322	14,886	9,817
ARIZONA	30,321	2,085	8,413	3,816	201	11,720	1,105	2,981	0
COLORADO	63,997	9,217	9,515	4,012	1,411	23,809	2,745	5,711	7,577
IDAHO	8,727	594	298	282	3	5,516	2	668	1,364
MONTANA	8,654	1,524	711	821	17	4,980	88	513	0
NEVADA	6,449	79	3,414	572	1	1,913	115	355	0
NEW MEXICO	18,211	7,259	1,125	2,031	143	3,433	476	2,923	821
UTAH	36,004	6,271	3,710	2,604	2,467	18,850	654	1,448	0
WYOMING	6,678	544	1,568	1,402	2	2,683	137	287	55
PACIFIC	528,609	54,146	67,063	71,440	10,842	274,781	10,627	34,480	5,230
ALASKA	16,560	487	4,984	5,247	2	4,150	0	1,730	0
CALIFORNIA	380,906	43,306	50,938	44,373	9,706	196,070	8,685	23,421	4,407
HAWAII	26,859	2,161	3,309	6,838	58	10,464	339	3,105	585
OREGON	34,768	1,055	2,550	5,855	411	19,790	817	4,218	72
WASHINGTON	69,516	7,177	5,282	9,127	665	44,307	786	2,006	166
OUTLYING AREAS	7,282	194	2,028	396	24	4,263	26	129	222

TABLE B-17.

GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN PUBLIC UNIVERSITIES AND COLLEGES, BY FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	1,796,429	205,008	194,112	145,410	41,780	937,135	48,304	157,945	66,735
NEW ENGLAND	53,381	6,020	5,885	4,892	1,518	26,590	2,484	5,894	148
CONNECTICUT	16,474	1,751	581	932	742	10,090	675	1,701	2
MAINE	6,438	333	230	1,757	0	3,200	101	817	0
MASSACHUSETTS	10,570	1,446	2,234	1,805	266	2,562	666	1,570	21
NEW HAMPSHIRE	3,856	823	834	213	31	1,645	172	138	0
RHODE ISLAND	8,855	1,581	1,799	0	474	3,222	455	1,324	0
VERMONT	7,188	86	207	135	5	5,871	415	344	125
MIDDLE ATLANTIC	139,967	9,898	15,439	11,545	3,605	74,907	3,901	14,459	6,213
NEW JERSEY	25,955	1,596	2,968	1,914	951	12,683	965	3,953	925
NEW YORK	68,081	3,154	6,235	5,317	2,390	41,442	1,954	5,069	2,520
PENNSYLVANIA	45,931	5,148	6,236	4,314	264	20,782	982	5,437	2,768
EAST NORTH CENTRAL	356,662	52,752	35,607	22,204	11,838	151,266	13,976	51,925	17,094
ILLINOIS	53,119	11,365	6,398	3,108	3,971	18,949	1,909	5,123	2,296
INDIANA	51,932	6,775	6,731	448	1,473	24,517	1,016	8,725	2,247
MICHIGAN	111,993	21,417	7,257	3,972	2,268	49,159	5,725	18,851	3,344
OHIO	50,347	8,428	4,491	1,921	708	26,832	854	5,458	1,655
WISCONSIN	89,271	4,767	10,730	12,755	3,418	31,809	4,472	13,768	7,552
WEST NORTH CENTRAL	182,712	17,911	12,359	7,152	3,273	118,367	4,467	13,713	5,470
IOWA	32,073	3,539	4,524	146	1,288	19,199	325	2,923	129
KANSAS	31,277	3,076	1,563	2,390	592	17,691	2,539	2,936	490
MINNESOTA	53,701	4,774	3,991	971	909	33,989	1,036	5,072	2,959
MISSOURI	34,538	4,530	1,377	832	353	24,391	343	1,451	1,261
NEBRASKA	17,711	1,117	689	1,317	128	13,641	48	771	0
NORTH DAKOTA	6,701	297	149	396	1	5,775	2	81	0
SOUTH DAKOTA	6,711	578	66	1,100	2	3,681	174	479	631
SOUTH ATLANTIC	225,274	32,202	25,495	8,590	6,599	117,732	4,369	19,110	11,177
DELAWARE	5,760	1,438	927	1,392	51	1,320	238	394	0
DISTRICT OF COLUMBIA	205	0	66	0	0	139	0	0	0
FLORIDA	42,531	4,555	5,905	2,055	1,437	22,093	1,681	4,744	61
GEORGIA	42,268	8,363	5,277	264	1,302	18,712	1,042	7,168	140
MARYLAND	28,420	3,397	6,894	2,354	2,014	12,239	319	884	319
NORTH CAROLINA	53,824	5,703	1,569	1,028	986	31,835	562	3,672	8,469
SOUTH CAROLINA	10,975	830	315	473	99	7,591	154	1,071	442
VIRGINIA	34,331	5,844	4,473	1,014	709	19,358	316	832	1,745
WEST VIRGINIA	6,960	2,032	69	10	1	4,445	57	345	1
EAST SOUTH CENTRAL	73,381	7,322	3,014	1,781	261	52,286	1,959	5,094	1,664
ALABAMA	24,878	2,653	686	1,241	37	18,520	858	731	152
KENTUCKY	17,124	1,189	675	298	75	10,798	528	2,082	1,479
MISSISSIPPI	19,023	1,196	962	168	92	15,019	190	1,395	1
TENNESSEE	12,356	2,284	691	74	57	7,949	383	886	32
WEST SOUTH CENTRAL	162,947	20,619	18,048	9,357	3,826	87,366	3,203	9,187	11,341
ARKANSAS	10,185	486	329	933	7	7,626	13	759	32
LOUISIANA	21,953	1,162	2,380	2,022	635	14,205	388	859	302
OKLAHOMA	19,633	2,739	703	532	406	10,433	240	800	3,780
TEXAS	111,176	16,232	14,636	5,870	2,778	55,102	2,562	6,769	7,227
MOUNTAIN	169,643	24,547	26,850	15,479	3,895	71,690	4,856	12,598	9,728
ARIZONA	30,321	2,085	8,413	3,816	201	11,720	1,105	2,981	0
COLORADO	57,338	6,683	8,263	3,978	1,207	23,561	2,337	3,863	7,490

MIDDLE ATLANTIC.....	139,967	9,898	15,439	11,545	3,605	74,907	3,901	14,459	6,213
NEW JERSEY.....	25,955	1,596	2,968	1,914	951	12,683	965	3,953	925
NEW YORK.....	68,081	3,154	6,235	5,317	2,390	41,442	1,954	5,069	2,520
PENNSYLVANIA.....	45,931	5,148	6,236	4,314	264	20,782	982	5,437	2,768
EAST NORTH CENTRAL.....	356,662	52,752	35,607	22,204	11,838	151,266	13,976	51,925	17,094
ILLINOIS.....	53,119	11,365	6,398	3,108	3,971	18,949	1,909	5,123	2,296
INDIANA.....	51,932	6,775	6,731	448	1,473	24,517	1,016	8,725	2,247
MICHIGAN.....	111,993	21,417	7,257	3,972	2,268	49,159	5,725	18,851	3,344
OHIO.....	50,347	8,428	4,491	1,921	708	26,832	854	5,458	1,655
WISCONSIN.....	89,271	4,767	10,730	12,755	3,418	31,809	4,472	13,768	7,552
WEST NORTH CENTRAL.....	182,712	17,911	12,359	7,152	3,273	118,367	4,467	13,713	5,470
IOWA.....	32,073	3,539	4,524	146	1,288	19,199	325	2,923	129
KANSAS.....	31,277	3,076	1,563	2,390	592	17,691	2,539	2,936	490
MINNESOTA.....	53,701	4,774	3,991	971	909	33,989	1,036	5,072	2,959
MISSOURI.....	34,538	4,530	1,377	832	353	24,391	343	1,451	1,261
NEBRASKA.....	17,711	1,117	689	1,317	128	13,641	48	771	0
NORTH DAKOTA.....	6,701	297	149	396	1	5,775	2	81	0
SOUTH DAKOTA.....	6,711	578	66	1,100	2	3,681	174	479	631
SOUTH ATLANTIC.....	225,274	32,202	25,495	8,590	6,599	117,732	4,369	19,110	11,177
DELAWARE.....	5,760	1,438	927	1,392	51	1,320	238	394	0
DISTRICT OF COLUMBIA	205	0	66	0	0	139	0	0	0
FLORIDA.....	42,531	4,555	5,905	2,055	1,437	22,093	1,681	4,744	61
GEORGIA.....	42,268	8,363	5,277	264	1,302	18,712	1,042	7,168	140
MARYLAND.....	28,420	3,397	6,894	2,354	2,014	12,239	319	884	319
NORTH CAROLINA.....	53,824	5,703	1,569	1,028	986	31,835	582	3,672	8,469
SOUTH CAROLINA.....	10,975	830	315	473	99	7,591	154	1,071	442
VIRGINIA.....	32,331	5,884	4,473	1,014	709	19,358	316	832	1,745
WEST VIRGINIA.....	6,960	2,032	69	10	1	4,445	57	345	1
EAST SOUTH CENTRAL.....	73,381	7,322	3,014	1,781	261	52,286	1,959	5,094	1,664
ALABAMA.....	24,878	2,653	686	1,241	37	18,520	858	731	152
KENTUCKY.....	17,124	1,189	675	298	75	10,798	528	2,082	1,479
MISSISSIPPI.....	19,023	1,196	962	168	92	15,019	190	1,395	1
TENNESSEE.....	12,356	2,284	691	74	57	7,949	383	886	32
WEST SOUTH CENTRAL.....	162,947	20,619	18,048	9,357	3,826	87,366	3,203	9,187	11,341
ARKANSAS.....	10,185	486	329	933	7	7,626	13	759	32
LOUISIANA.....	21,953	1,162	2,380	2,022	635	14,205	388	859	302
OKLAHOMA.....	19,633	2,739	703	532	406	10,433	240	600	3,780
TEXAS.....	111,176	16,232	14,636	5,870	2,778	55,102	2,562	6,769	7,227
MOUNTAIN.....	169,643	24,547	26,850	15,479	3,895	71,690	4,856	12,598	9,728
ARIZONA.....	30,321	2,005	8,413	3,816	201	11,720	1,105	2,981	0
COLORADO.....	57,338	6,643	8,263	3,974	1,207	23,561	2,337	3,863	7,490
IDAHO.....	8,727	594	298	282	3	5,516	2	668	1,364
MONTANA.....	8,654	1,524	711	821	17	4,980	88	513	0
NEVADA.....	6,449	79	3,414	572	1	1,913	115	355	0
NEW MEXICO.....	18,170	7,258	1,107	2,030	142	3,420	474	2,920	819
UTAH.....	33,306	5,820	3,076	2,582	2,322	17,897	598	1,011	0
WYOMING.....	6,678	564	1,568	1,402	2	2,683	137	287	55
PACIFIC.....	425,180	33,563	49,387	64,064	6,941	232,668	9,063	25,836	3,678
ALASKA.....	16,560	447	4,984	5,247	2	4,150	0	1,730	0
CALIFORNIA.....	278,425	22,707	33,662	37,040	5,834	154,381	7,154	14,786	2,861
HAWAII.....	26,859	2,161	3,309	6,838	58	10,464	339	3,105	585
OREGON.....	34,015	1,055	2,259	5,827	384	19,418	787	4,217	68
WASHINGTON.....	69,321	7,173	5,173	9,112	663	44,255	783	1,998	164
OTHER.....	7,282	194	2,028	396	24	4,263	26	129	222

TABLE B-18.

GEOGRAPHIC DISTRIBUTION OF CURRENT R&D EXPENDITURES IN PRIVATE UNIVERSITIES AND COLLEGES, BY FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	1,137,123	179,444	146,842	54,966	32,903	580,859	26,072	77,662	38,375
NEW ENGLAND	285,922	84,116	42,160	22,770	12,816	93,058	4,735	22,105	4,162
CONNECTICUT	37,112	1,453	5,568	1,044	697	24,580	1,313	2,357	100
MAINE	250	0	57	30	2	86	2	72	1
MASSACHUSETTS	234,387	80,155	34,538	20,876	10,687	62,737	2,797	19,130	3,467
NEW HAMPSHIRE	4,979	494	362	274	175	3,205	223	77	169
RHODE ISLAND	9,110	2,014	1,603	546	1,253	2,420	392	461	421
VERMONT	84	0	32	0	2	30	8	8	4
MIDDLE ATLANTIC	390,916	43,021	49,609	12,494	10,813	218,779	11,100	24,635	20,465
NEW JERSEY	24,194	7,313	7,940	1,099	1,084	2,865	1,245	2,639	9
NEW YORK	279,713	25,943	29,068	10,626	6,716	170,057	8,119	14,467	17,717
PENNSYLVANIA	87,009	9,765	12,601	769	3,013	45,857	1,736	7,529	5,739
EAST NORTH CENTRAL	118,441	13,604	20,223	2,968	2,549	66,564	1,610	7,513	3,410
ILLINOIS	78,145	2,734	12,194	1,950	1,651	49,177	1,237	5,967	3,235
INDIANA	4,749	916	2,415	4	130	1,103	48	121	12
MICHIGAN	460	237	76	14	21	90	1	19	2
OHIO	26,833	8,923	4,310	480	722	10,655	320	1,262	161
WISCONSIN	8,254	794	1,228	520	25	5,539	4	144	0
WEST NORTH CENTRAL	33,200	3,798	1,693	310	174	22,483	257	935	3,550
IOWA	515	3	115	13	6	108	11	251	8
KANSAS	33	4	14	1	2	10	1	2	2
MINNESOTA	876	0	123	1	25	213	48	258	208
MISSOURI	31,017	3,792	1,384	292	109	21,518	192	405	3,325
NEBRASKA	649	2	51	3	4	572	3	7	7
NORTH DAKOTA	0	0	0	0	0	0	0	0	0
SOUTH DAKOTA	110	0	6	0	28	62	2	12	0
SOUTH ATLANTIC	135,622	7,713	8,498	7,907	1,416	95,863	2,375	8,436	3,414
DELAWARE	0	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	29,284	3,355	2,484	178	839	14,382	1,044	5,228	1,774
FLORIDA	28,694	2,391	1,031	4,518	73	18,866	203	1,412	200
GEORGIA	8,334	17	274	6	14	7,835	85	26	77
MARYLAND	42,423	969	2,247	3,138	161	33,990	419	1,106	393
NORTH CAROLINA	26,023	686	2,222	2	241	20,695	593	623	961
SOUTH CAROLINA	138	0	114	0	0	24	0	0	0
VIRGINIA	672	293	104	64	87	55	28	35	6
WEST VIRGINIA	54	2	22	1	1	16	3	6	3
EAST SOUTH CENTRAL	20,692	490	1,241	132	95	13,938	2,858	935	1,003
ALABAMA	1,479	97	396	79	26	232	128	435	86
KENTUCKY	52	1	21	3	1	14	3	6	3
MISSISSIPPI	32	2	2	21	1	2	0	4	0
TENNESSEE	19,129	390	822	29	67	13,690	2,727	490	914
WEST SOUTH CENTRAL	39,503	3,073	3,838	948	789	26,847	1,107	2,171	730
ARKANSAS	56	0	0	0	0	56	0	0	0
LOUISIANA	12,515	636	203	11	312	10,797	206	176	174
OKLAHOMA	397	217	28	23	21	22	9	77	0
TEXAS	26,535	2,220	3,607	914	456	15,972	892	1,918	556
MOUNTAIN	9,398	3,026	1,904	61	350	1,214	466	2,288	89

RHODE ISLAND	9,110	2,014	1,603	546	1,253	2,420	392	461	421
VERMONT	84	0	32	0	2	30	8	8	4
MIDDLE ATLANTIC	390,916	43,021	49,609	12,494	10,813	218,779	11,100	24,635	20,465
NEW JERSEY	24,194	7,313	7,940	1,099	1,084	2,865	1,245	2,639	9
NEW YORK	279,713	25,943	29,068	10,626	6,716	170,057	8,119	14,467	14,717
PENNSYLVANIA	87,009	9,765	12,601	769	3,013	45,857	1,736	7,529	5,739
EAST NORTH CENTRAL	118,441	13,604	20,223	2,968	2,549	66,564	1,610	7,513	3,410
ILLINOIS	78,145	2,734	12,194	1,950	1,651	49,177	1,237	5,967	3,235
INDIANA	4,749	916	2,415	4	130	1,103	48	121	12
MICHIGAN	460	237	76	14	21	90	1	19	2
OHIO	26,833	8,923	4,310	480	722	10,655	320	1,262	161
WISCONSIN	8,254	794	1,228	520	25	5,539	4	144	0
WEST NORTH CENTRAL	33,200	3,798	1,693	310	174	22,483	257	935	3,550
IOWA	515	3	115	13	6	108	11	251	8
KANSAS	33	1	14	1	2	10	1	2	2
MINNESOTA	876	0	123	1	25	213	48	258	208
MISSOURI	31,017	3,792	1,384	292	109	21,518	192	405	3,325
NEBRASKA	649	2	51	3	4	572	3	7	7
NORTH DAKOTA	0	0	0	0	0	0	0	0	0
SOUTH DAKOTA	110	0	6	0	28	62	2	12	0
SOUTH ATLANTIC	135,622	7,713	8,498	7,907	1,416	95,863	2,375	8,436	3,414
DELAWARE	0	0	0	0	0	0	0	0	0
DISTRICT OF COLUMBIA	29,284	3,355	2,488	178	839	14,382	1,044	5,228	1,774
FLORIDA	28,694	2,391	1,031	4,518	73	18,866	203	1,412	200
GEORGIA	8,334	17	274	6	14	7,835	85	26	77
MARYLAND	42,423	969	2,247	3,138	161	33,990	419	1,106	393
NORTH CAROLINA	26,023	686	2,222	2	241	20,695	593	623	961
SOUTH CAROLINA	138	0	114	0	0	24	0	0	0
VIRGINIA	672	293	104	64	87	55	28	35	6
WEST VIRGINIA	54	2	22	1	1	16	3	6	3
EAST SOUTH CENTRAL	20,692	490	1,241	132	95	13,938	2,858	935	1,003
ALABAMA	1,479	97	396	79	26	232	128	435	86
KENTUCKY	52	1	21	3	1	14	3	6	3
MISSISSIPPI	32	2	2	21	1	2	0	4	0
TENNESSEE	19,129	390	822	29	67	13,690	2,727	490	914
WEST SOUTH CENTRAL	39,503	3,073	3,838	948	789	26,847	1,107	2,171	730
ARKANSAS	56	0	0	0	0	56	0	0	0
LOUISIANA	12,515	636	203	11	312	10,797	206	176	174
OKLAHOMA	397	217	28	23	21	22	9	77	0
TEXAS	26,535	2,220	3,607	914	456	15,972	892	1,918	556
MOUNTAIN	9,398	3,026	1,904	61	350	1,214	466	2,288	89
ARIZONA	0	0	0	0	0	0	0	0	0
COLORADO	6,659	2,574	1,252	38	204	248	408	1,848	87
IDAHO	0	0	0	0	0	0	0	0	0
MONTANA	0	0	0	0	0	0	0	0	0
NEVADA	0	0	0	0	0	0	0	0	0
NEW MEXICO	41	1	18	1	1	13	2	3	2
UTAH	2,698	451	634	22	145	953	56	437	0
WYOMING	0	0	0	0	0	0	0	0	0
PACIFIC	103,429	20,603	17,676	7,376	3,901	42,113	1,564	8,644	1,552
ALASKA	0	0	0	0	0	0	0	0	0
CALIFORNIA	102,481	20,599	17,276	7,333	3,872	41,689	1,531	8,635	1,546
HAWAII	0	0	0	0	0	0	0	0	0
OREGON	753	0	291	28	27	372	30	1	4
WASHINGTON	195	4	109	15	2	52	3	8	2
OTHER	0	0	0	0	0	0	0	0	0

TABLE B-19.

PERCENT DISTRIBUTION OF R&D EXPENDITURES BY SOURCE OF FUNDS GROUPED BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS, FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY SIZE OF R&D EXPENDITURES	SOURCE						
	TOTAL	FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. AND HEALTH AGENCIES	INDUSTRY	INSTI OWN
TOTAL, ALL INSTITUTIONS	2,933,552	2,044,358	270,850	14,386	131,757	86,385	31
	PERCENT DISTRIBUTION						
1st 10	23.3	25.2	14.5	4.9	25.7	16.0	2
1st 20	37.8	41.7	18.2	27.3	43.3	27.0	3
1st 30	48.1	50.2	36.9	31.8	51.5	41.9	4
1st 40	56.7	58.4	51.6	44.3	61.5	47.7	5
1st 50	63.6	65.1	61.3	47.5	65.3	55.0	5
1st 60	68.9	69.8	66.4	49.5	68.4	62.5	6
1st 70	73.5	73.4	75.6	50.0	71.2	66.1	7
1st 80	77.5	77.4	77.8	59.6	75.1	69.8	8
1st 90	80.7	80.9	80.4	66.4	77.0	72.1	8
1st 100	83.3	83.5	84.6	66.4	79.3	75.5	8
1st 150	92.4	92.8	93.8	78.2	90.2	87.0	9
1st 200	96.5	96.9	96.7	85.5	94.2	94.7	9
All Other Institutions	3.5	3.1	3.3	14.5	5.8	5.3	

PERCENT DISTRIBUTION OF R&D EXPENDITURES BY SOURCE OF FUNDS
GROUPED BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS,
FY 1973

(DOLLARS IN THOUSANDS)

TAL	FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. AND HEALTH AGENCIES	INDUSTRY	INSTITUTIONS' OWN FUNDS	OTHER
			SOURCE				
3,552	2,044,358	270,850	14,386	131,757	86,385	317,396	68,420
			PERCENT	DISTRIBUTION			
.3	25.2	14.5	4.9	25.7	16.0	20.8	21.1
.8	41.7	18.2	27.3	43.3	27.0	30.1	38.4
.1	50.2	36.9	31.8	51.5	41.9	45.8	46.1
.7	58.4	51.6	44.3	61.5	47.7	52.5	51.3
.6	65.1	61.3	47.5	65.3	55.0	59.7	56.0
.9	69.8	66.4	49.5	68.4	62.5	69.8	62.8
.5	73.4	75.6	50.0	71.2	66.1	77.5	67.8
.5	77.4	77.8	59.6	75.1	69.8	82.2	75.6
.7	80.9	80.4	66.4	77.0	72.1	84.2	80.4
.3	83.5	84.6	66.4	79.3	75.5	85.5	84.3
.4	92.8	93.8	78.2	90.2	87.0	91.8	93.0
5	96.9	96.7	85.5	94.2	94.7	96.1	95.8
.5	3.1	3.3	14.5	5.8	5.3	3.9	4.2

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TABLE B-20.

PERCENT DISTRIBUTION OF R&D EXPENDITURES BY FIELD OF SCIENCE GROUPED BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS, FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY SIZE OF R&D EXPENDITURES	TOTAL	ENGINEERING	PHYSICAL	ENVIRONMENTAL	MATHEMATICS	LIFE
	FIELD					
TOTAL, ALL INSTITUTIONS	2,933,552	384,452	340,954	200,376	74,683	1,517,994
	PERCENT DISTRIBUTION					
1st 10	23.3	33.9	26.1	32.6	28.9	17.9
1st 20	37.8	42.1	40.3	43.7	44.4	34.9
1st 30	48.1	52.6	49.6	51.9	50.4	45.8
1st 40	56.7	58.3	54.2	59.2	57.2	56.5
1st 50	63.6	65.6	63.1	68.2	64.5	62.7
1st 60	68.9	69.8	70.3	73.0	71.3	68.5
1st 70	73.5	73.2	72.5	80.5	74.4	74.0
1st 80	77.5	78.1	76.0	81.6	78.8	78.3
1st 90	80.7	80.9	79.0	84.1	83.4	81.8
1st 100	83.3	82.7	80.4	85.5	84.9	85.2
1st 150	92.4	92.5	88.4	91.9	92.5	95.1
1st 200	96.5	97.5	94.6	95.0	96.1	98.1
All Other Institutions	3.5	2.5	5.4	5.0	3.9	1.9

PERCENT DISTRIBUTION OF R&D EXPENDITURES BY FIELD OF SCIENCE
GROUPED BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS,
FY 1973

(DOLLARS IN THOUSANDS)

F I E L D

AL	ENGINEERING	PHYSICAL	ENVIRONMENTAL	MATHEMATICS	LIFE	PSYCHOLOGY	SOCIAL	OTHER
,552	384,452	340,954	200,376	74,683	1,517,994	74,376	235,607	105,110
			P E R C E N T D I S T R I B U T I O N					
3	33.9	26.1	32.6	28.9	17.9	21.5	28.0	21.5
8	42.1	40.3	43.7	44.4	34.9	37.8	39.0	35.9
1	52.6	49.6	51.9	50.4	45.8	45.7	50.2	48.1
7	58.3	54.2	59.2	57.2	56.5	54.5	56.4	59.5
6	65.6	63.1	68.2	64.5	62.7	62.7	62.1	64.0
9	69.8	70.3	73.0	71.3	68.5	66.2	66.2	67.1
5	73.2	72.5	80.5	74.4	74.0	67.4	67.8	73.6
5	78.1	76.0	81.6	78.8	78.3	70.5	72.0	77.6
7	80.9	79.0	84.1	83.4	81.8	73.4	74.7	80.5
3	82.7	80.4	85.5	84.9	85.2	75.5	76.0	85.0
4	92.5	88.4	91.9	92.5	95.1	81.0	86.2	90.3
5	97.5	94.6	95.0	96.1	98.1	90.8	91.6	94.7
5	2.5	5.4	5.0	3.9	1.9	9.2	8.4	5.3

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
UNITED STATES, TOTAL	2,933,552	2,044,358	270,850	14,386	131,757	86,385	317,396	68,420
1 MASS INST OF TECHNOLOGY	125,413	112,652	350	149	3,571	3,874	451	4,366
2 UNIV OF WISCONSIN-MADISON	84,201	45,783	16,172	0	2,384	1,038	16,501	2,323
3 UNIVERSITY OF MICHIGAN	69,229	45,021	2,198	23	3,359	4,082	12,959	1,587
4 U OF CAL SAN DIEGO	66,789	60,945	103	0	2,210E	0	3,531	0
5 HARVARD UNIVERSITY	58,480	47,765	260	1	5,436	810	1,475	2,733
6 CORNELL UNIVERSITY	57,453	32,273	13,634	211	2,884	2,145	5,141	1,165
7 COLUMBIA UNIV MAIN DIV	57,376	46,362	173	174	6,815	457	3,395	0
8 U OF CAL BERKELEY	56,692	42,716	1,473	0	2,318E	0	10,185	0
9 STANFORD UNIVERSITY	53,984	50,751	12	145	1,797	145	1,087	47
10 UNIVERSITY OF MINNESOTA	53,447	30,800	4,959	0	3,081	1,259	11,146	2,202
TOTAL 1ST 10 INSTS.	683,064	515,068	39,334	703	33,855	13,810	65,871	14,423
11 UNIVERSITY OF WASHINGTON	53,424	47,305	1,978	320	1,129	755	433	1,504
12 U OF CAL LOS ANGELES	52,291	44,011	455	0	3,301E	114E	4,410	0
13 UNIVERSITY OF CHICAGO	51,711	37,930	1,385	685	4,186	217	3,391	3,917
14 JOHNS HOPKINS UNIVERSITY	42,268	35,416	1,523	20	1,293	883	1,650	1,483
15 UNIV OF PENNSYLVANIA	40,594	31,388	972	273	3,001	1,007	2,865	1,088
16 UNIV ILLINOIS URBANA	40,223	27,404	1,290	473	735	580	9,304	437
17 UNIVERSITY OF ROCHESTER	38,497	30,135	428	274	1,282	1,316	4,510	552
18 NEW YORK UNIVERSITY	37,219	27,081	437	814	3,697	1,098	2,148	1,944
19 UNIVERSITY OF COLORADO	34,365	26,774	1,158	360	1,851	3,430	300	492
20 YALE UNIVERSITY	34,200	29,697	420	0	2,736	138	772	437
TOTAL 1ST 20 INSTS.	1,107,856	852,209	49,380	3,922	57,066	23,348	95,654	26,277
21 TEXAS A & M UNIVERSITY	33,618	15,021	14,176	0	777	3,468	0	176
22 U OF CAL DAVIS	33,247	17,712	1,077	0	659E	1,144E	12,655	0
23 MICHIGAN STATE UNIVERSITY	32,534	20,554	6,836	332	2,440	1,673	0	699
24 UNIV OF TEXAS AT AUSTIN	31,386	17,391	6,780	88	1,383	371	3,950	1,423
25 OHIO STATE UNIVERSITY	30,778	19,693	6,374	0	1,287	1,828	1,016	580
26 PENNSYLVANIA STATE UNIV	30,286E	17,201E	2,648	52	502E	1,322E	7,820	741E
27 U OF CAL SAN FRANCISCO	29,109	24,042	248	0	2,191E	394E	2,234	0
28 UNIVERSITY OF ARIZONA	27,764	14,409	7,287	86	733	744	3,438	1,067
29 PURDUE UNIV ALL CAMPUSES	27,315	16,692	4,398	0	193	1,206	4,812	14
30 UNIVERSITY OF FLORIDA	27,254	10,699	777	90	660	666	13,777	585E
TOTAL 1ST 30 INSTS.	1,411,147	1,025,623	99,981	4,570	67,891	36,164	145,356	31,562
31 UNIVERSITY OF HAWAII	26,859	16,136	9,907	130	363	65	55	203
32 UNIVERSITY OF MIAMI	26,769	18,237	18	67	1,321	1,060	4,960	1,106
33 UNIVERSITY OF GEORGIA	26,310	8,353	15,170	0	58	769	1,960	0
34 WASHINGTON UNIV ST LOUIS	25,286	22,666	175	0	965	766	0	714
35 UNIV OF STHRN CALIFORNIA	25,155	21,855	60	207	1,750	429	0	854
36 YESHIVA UNIVERSITY	24,916	21,571	0	0	3,345	0	0	0
37 N C STATE UNIV AT RALEIGH	24,856	11,326	11,155	100	488	618	500	669
38 UNIV OF NC AT CHAPEL HILL	24,644	19,930	1,615	0	1,414	780	905	0
39 ROCKEFELLER UNIVERSITY	24,103	9,379	995	199	2,634	183	10,710	3
40 UNIVERSITY OF UTAH	23,469	18,460	648	1,103	823	348	2,087	0
TOTAL 1ST 40 INSTS.	1,663,514	1,193,536	139,724	6,376	81,052	41,182	166,533	35,111
41 UNIV OF MISSOURI COLUMBIA	22,495	7,803	5,647	0	170	432	8,121	322

4	U OF CAL SAN DIEGO	66,789	60,945	103	0	2,210E	0	3,531	0
5	HARVARD UNIVERSITY	58,480	47,765	260	1	5,436	810	1,4[illegible]	2,733
6	CORNELL UNIVERSITY	57,453	32,273	13,634	211	2,884	2,145	5,14[illegible]	1,165
7	COLUMBIA UNIV MAIN DIV	57,376	46,362	173	174	6,815	457	3,39[illegible]	0
8	U OF CAL BERKELEY	56,692	42,716	1,473	0	2,318E	0	10,18[illegible]	0
9	STANFORD UNIVERSITY	53,984	50,751	12	145	1,797	145	1,087	47
10	UNIVERSITY OF MINNESOTA	53,447	30,800	4,959	0	3,081	1,259	11,146	2,202
	TOTAL 1ST 10 INSTS.	683,064	515,068	39,334	703	33,855	13,810	65,871	14,423
11	UNIVERSITY OF WASHINGTON	53,424	47,305	1,978	320	1,129	755	433	1,504
12	U OF CAL LOS ANGELES	52,291	44,011	455	0	3,301E	114E	4,410	0
13	UNIVERSITY OF CHICAGO	51,711	37,930	1,385	685	4,186	217	3,391	3,917
14	JOHNS HOPKINS UNIVERSITY	42,268	35,416	1,523	20	1,293	883	1,650	1,483
15	UNIV OF PENNSYLVANIA	40,594	31,388	972	273	3,001	1,007	2,865	1,088
16	UNIV ILLINOIS URBANA	40,223	27,404	1,290	473	735	580	9,304	437
17	UNIVERSITY OF ROCHESTER	38,497	30,135	428	274	1,282	1,316	4,510	552
18	NEW YORK UNIVERSITY	37,219	27,081	437	814	3,697	1,098	2,148	1,944
19	UNIVERSITY OF COLORADO	34,365	26,774	1,158	360	1,851	3,430	300	492
20	YALE UNIVERSITY	34,200	29,697	420	0	2,736	138	772	437
	TOTAL 1ST 20 INSTS.	1,107,856	852,209	49,380	3,922	57,066	23,348	95,654	26,277
21	TEXAS A & M UNIVERSITY	33,618	15,021[illegible]	14,176	0	777	3,468	0	176
22	U OF CAL DAVIS	33,247	17,712	1,077	0	659E	1,144E	12,655	0
23	MICHIGAN STATE UNIVERSITY	32,534	20,554	6,836	332	2,440	1,673	0	699
24	UNIV OF TEXAS AT AUSTIN	31,386	17,391	6,780	88	1,383	371	3,950	1,423
25	OHIO STATE UNIVERSITY	30,778	19,693	6,374	0	1,287	1,828	1,016	580
26	PENNSYLVANIA STATE UNIV	30,286E	17,201E	2,648	52	502E	1,322E	7,820	741E
27	U OF CAL SAN FRANCISCO	29,109	24,042	248	0	2,191E	394E	2,234	0
28	UNIVERSITY OF ARIZONA	27,764	14,409	7,287	86	733	744	3,438	1,067
29	PURDUE UNIV ALL CAMPUSES	27,315	16,692	4,398	0	193	1,206	4,812	14
30	UNIVERSITY OF FLORIDA	27,254	10,699	777	90	660	666	13,777	585E
	TOTAL 1ST 30 INSTS.	1,411,147	1,025,623	99,981	4,570	67,891	36,164	145,356	31,562
31	UNIVERSITY OF HAWAII	26,859	16,136	9,907	130	363	65	55	203
32	UNIVERSITY OF MIAMI	26,769	18,237	18	67	1,321	1,060	4,960	1,106
33	UNIVERSITY OF GEORGIA	26,310	8,353	15,170	0	58	769	1,960	0
34	WASHINGTON UNIV ST LOUIS	25,286	22,666	175	0	965	766	0	714
35	UNIV OF STHRN CALIFORNIA	25,155	21,855	60	207	1,750	429	0	854
36	YESHIVA UNIVERSITY	24,916	21,571	0	0	3,345	0	0	0
37	N C STATE UNIV AT RALEIGH	24,856	11,326	11,155	100	488	618	500	669
38	UNIV OF NC AT CHAPEL HILL	24,644	19,930	1,615	0	1,414	780	905	0
39	ROCKEFELLER UNIVERSITY	24,103	9,379	995	199	2,634	183	10,710	3
40	UNIVERSITY OF UTAH	23,469	18,460	648	1,103	823	348	2,087	0
	TOTAL 1ST 40 INSTS.	1,663,514	1,193,536	139,724	6,376	81,052	41,182	166,533	35,111
41	UNIV OF MISSOURI COLUMBIA	22,495	7,803	5,647	0	170	432	8,121	322
42	DUKE UNIVERSITY	22,261	19,296	63	0	604	537	304	3,477
43	RUTGERS THE STATE UNIV	21,939	10,208	5,337	71	291	0	5,278	754
44	COLORADO STATE UNIVERSITY	20,451	15,415	3,442	71	209	961	352	1
45	UNIV OF MD COLLEGE PARK	20,365	12,635	5,858	3	58	1,297	470	44
46	OREGON STATE UNIVERSITY	20,241	11,680	5,529	58	385	875	1,700	14
47	PRINCETON UNIVERSITY	18,696	13,742	0	0	641	616	3,697	0
48	CALIFORNIA INST OF TECH	18,653	16,603	0	9	611	595	683	152
49	CASE WESTERN RESERVE UNIV	17,963	15,154	118	117	1,535	689	97	253
50	UNIVERSITY OF KANSAS	17,925	14,141	406	135	461	354	2,218	210
	TOTAL 1ST 50 INSTS.	1,864,503	1,330,213	166,124	6,840	86,017	47,518	189,453	38,338

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN
CONTINUED DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTITUTIONS' OWN FUNDS	OTHER
51 LA ST U BATON ROUGE	16,568	4,833	366	0	66	569	10,734	0
52 UNIVERSITY OF ALASKA	16,560	11,822	229	0	207	484	3,000	818
53 IOWA ST U OF SCI & TECH	16,525	6,178	4,514	147	103	715	4,816	52
54 UNIVERSITY OF CONNECTICUT	16,381	7,618	182	47	532	94	7,481	427
55 NORTHWESTERN UNIVERSITY	16,261	12,809	23	15	784	22	528	2,080
56 WASHINGTON STATE UNIV	15,402	4,559	8,028	14	37	602	2,092	70
57 UNIVERSITY OF IOWA	15,386	13,853	80	0	206	204	487	556
58 BAYLOR COLLEGE OF MED	15,134	13,235	0	3	1,058	441	13	384
59 UNIVERSITY OF PITTSBURGH	15,048	13,074	106	0	732	123	798	215
60 CARNEGIE-MELLON UNIV	14,850	8,783	189	52	317	3,258	2,193	58
TOTAL 1ST 60 INSTS.	2,022,618	1,426,977	179,841	7,118	90,059	58,030	221,595	42,998
61 WOODS HOLE OCNGRPHIC INST	14,342	13,370	0	0	165	246	203	318
62 UNIV OF NEBRASKA - LNCLN	13,970	3,990	6,303	36	174	397	3,042	28
63 U OF CAL RIVERSIDE	13,960	5,606	959	0	330E	0	7,065	0
64 VANDENBILT UNIVERSITY	13,683	11,780	24	42	614	252	834	137
65 OKLAHOMA STATE UNIVERSITY	13,416	6,122	4,695	0	74	126	1,504	895
66 VIRGINIA POLYTECHNIC INST	13,380	5,189	6,488	0	207	660	73	763
67 U OF TEX M D ANDERSON HOS	13,264	7,962	0	0	580	0	4,431	291
68 UNIV OF KENTUCKY ALL CAM	12,594	6,248	1,403	0	215	240	4,460	28
69 KANSAS ST UNIVERSITY	12,457	5,517	4,779	0	79	356	1,726	0
70 TULANE UNIVERSITY	12,392	7,983	251	1	1,325	776	1,122	934
TOTAL 1ST 70 INSTS.	2,156,076	1,500,744	204,743	7,197	93,822	57,083	246,095	46,392
71 GEORGIA INSTITUTE OF TECH	12,263	6,111	402	192	25	988	4,024	521
72 GEORGE WASHINGTON UNIV	12,150	10,810	0	81	484	56	595	124
73 UNIVERSITY OF CINCINNATI	12,142	6,903	100	378	704	520	894	2,643
74 SYRACUSE UNIVERSITY	11,988	10,233	403	147	256	461	450	38
75 CUNY MT SINAI SCH OF MED	11,785	8,055	0	157	1,282	258	1,249	784
76 TEMPLE UNIVERSITY	11,732	7,190	465	15	1,044	60	2,002	956
77 UNIV ALABAMA BIRMINGHAM	11,588	10,729	44	16	294	385	0	120
78 FLORIDA STATE UNIVERSITY	11,324	8,695	565	14	604	0	1,446	0
79 MISSISSIPPI STATE UNIV	11,113	4,216	3,938	378	28	245	2,280	28
80 UNIVERSITY OF VIRGINIA	11,027	8,425	71	0	455	238	1,720	118
TOTAL 1ST 80 INSTS.	2,273,188	1,582,111	210,731	8,575	98,998	60,294	260,755	51,724
81 SUNY BUFFALO	10,380	8,139	113	190	398	80	1,342	118
82 UTAH STATE UNIVERSITY	9,837	7,594	1,503	5	0	501	0	234
83 INDIANA UNIVERSITY-PURDUE	9,765	6,514	124	408	568	460	1,691	0
84 SUNY UPSTATE MEDICAL CTR	9,486	6,720	0	7	133	97	0	2,529
85 AUBURN UNIVERSITY	9,464	4,078	3,358	0	5	271	1,717	35
86 BOSTON UNIVERSITY	9,237	8,407	34	29	651	80	0	36
87 INDIANA UNIV-BLOOMINGTON	9,214	7,744	233	168	115	70	662	222
88 UNIV OF MASS AT AMHERST	9,180	6,719	1,239	8	206	296	712	0
89 BROWN UNIVERSITY	9,075	8,537	27	56	280	69	0	106
90 UNIV OF RHODE ISLAND	8,855	7,466	522	100	160	50	520	37
TOTAL 1ST 90 INSTS.	2,367,681	1,658,029	217,884	9,546	101,514	62,268	267,399	55,041
91 UNIVERSITY OF IDAHO	8,572	3,759	3,626	11	20	432	724	0

52	UNIVERSITY OF ALASKA	16,560	11,822	229	0	207	484	3,000	818
53	IOWA ST U OF SCI & TECH	16,525	6,178	4,514	147	103	715	4,816	52
54	UNIVERSITY OF CONNECTICUT	16,381	7,618	182	47	532	94	7,481	427
55	NORTHWESTERN UNIVERSITY	16,261	12,809	23	15	784	22	528	2,080
56	WASHINGTON STATE UNIV	15,402	4,559	8,028	14	37	602	2,092	70
57	UNIVERSITY OF IOWA	15,386	13,853	80	0	206	204	487	556
58	BAYLOR COLLEGE OF MED	15,134	13,235	0	3	1,058	441	13	384
59	UNIVERSITY OF PITTSBURGH	15,048	13,074	106	0	732	123	798	215
60	CARNEGIE-MELLON UNIV	14,850	8,783	189	52	317	3,258	2,193	58
	TOTAL 1ST 60 INSTS.	2,022,618	1,426,977	179,841	7,118	90,059	54,030	221,595	42,998
61	WOODS HOLE OCEANOGRAPHIC INST	14,342	13,370	0	0	165	246	243	318
62	UNIV OF NEBRASKA - LNCLN	13,970	3,990	6,303	36	174	397	3,042	28
63	U OF CAL RIVERSIDE	13,960	5,606	959	0	330E	0	7,065	0
64	VANDERBILT UNIVERSITY	13,683	11,780	24	42	614	252	834	137
65	OKLAHOMA STATE UNIVERSITY	13,416	6,122	4,695	0	74	126	1,504	895
66	VIRGINIA POLYTECHNIC INST	13,380	5,189	6,488	0	207	660	73	763
67	U OF TEX M D ANDERSON HOS	13,264	7,962	0	0	580	0	4,431	291
68	UNIV OF KENTUCKY ALL CAM	12,594	6,248	1,403	0	215	240	4,460	28
69	KANSAS ST UNIVERSITY	12,457	5,517	4,779	0	79	356	1,726	0
70	TULANE UNIVERSITY	12,392	7,983	251	1	1,325	776	1,122	934
	TOTAL 1ST 70 INSTS.	2,156,076	1,500,744	204,743	7,197	93,822	57,083	246,095	46,392
71	GEORGIA INSTITUTE OF TECH	12,263	6,111	402	192	25	988	4,024	521
72	GEORGE WASHINGTON UNIV	12,150	10,810	0	81	484	56	595	124
73	UNIVERSITY OF CINCINNATI	12,142	6,903	100	378	704	520	894	2,643
74	SYRACUSE UNIVERSITY	11,988	10,233	403	147	256	461	450	38
75	CUNY MT SINAI SCH OF MED	11,785	8,055	0	157	1,282	258	1,249	784
76	TEMPLE UNIVERSITY	11,732	7,190	465	15	1,044	60	2,002	956
77	UNIV ALABAMA BIRMINGHAM	11,588	10,729	44	16	294	385	0	120
78	FLORIDA STATE UNIVERSITY	11,324	8,695	565	14	604	0	1,446	0
79	MISSISSIPPI STATE UNIV	11,113	4,216	3,938	378	28	245	2,280	28
80	UNIVERSITY OF VIRGINIA	11,027	8,425	71	0	455	238	1,720	118
	TOTAL 1ST 80 INSTS.	2,273,188	1,582,111	210,731	8,575	98,998	60,294	260,755	51,724
81	SUNY BUFFALO	10,380	8,139	113	190	398	80	1,342	118
82	UTAH STATE UNIVERSITY	9,837	7,594	1,503	5	0	501	0	234
83	INDIANA UNIVERSITY-PURDUE	9,765	6,514	124	408	568	460	1,691	0
84	SUNY UPSTATE MEDICAL CTR	9,486	6,720	0	7	133	97	0	2,529
85	AUBURN UNIVERSITY	9,464	4,078	3,358	0	5	271	1,717	35
86	BOSTON UNIVERSITY	9,237	8,407	34	29	651	80	0	36
87	INDIANA UNIV-BLOOMINGTON	9,214	7,744	233	168	115	70	662	222
88	UNIV OF MASS AT AMHERST	9,180	6,719	1,239	8	206	296	712	0
89	BROWN UNIVERSITY	9,075	8,537	27	56	280	69	0	106
90	UNIV OF RHODE ISLAND	8,855	7,466	522	100	160	50	520	37
	TOTAL 1ST 90 INSTS.	2,367,681	1,654,029	217,884	9,546	101,514	62,268	267,399	55,041
91	UNIVERSITY OF IDAHO	8,572	3,759	3,626	11	20	432	724	0
92	SUNY STONY BROOK	8,540	6,837	227E	1	757E	492E	94E	132E
93	EMORY UNIVERSITY	8,232	7,141	0	0	451	347	73	220
94	GEORGETOWN UNIVERSITY	7,771	5,026	0	0	696	171	817	1,061
95	UNIVERSITY OF ARKANSAS	7,638	2,811	4,372	0	45	303	0	107
96	TUFTS UNIVERSITY	7,436	6,393	13	0	535	454	41	0
97	UNIV OF VT & ST AGRIC COL	7,188	4,761	742	0	225	136	1,160	164
98	UNIVERSITY OF NEW MEXICO	7,093	5,093	405	0	25	53	1,064	453
99	U TENN MED UNITS MEMPHIS	7,081	6,001	215	0	154	439	0	272
100	WEST VIRGINIA UNIVERSITY	6,851	4,736	1,633	0	48	128	67	239
	TOTAL 1ST 100 INSTS.	2,444,083	1,706,587	229,117	9,55H	104,470	65,223	271,439	57,689

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
101 VIRGINIA COMMONWLTH UNIV	6,850	5,282	181	36	587	299	454	11
102 NEW MEXICO STATE UNIV	6,849	6,257	239	13	3	337	0	0
103 UNIV OF MD BALTIMORE	6,812	5,695	2	0	862	224	8	21
104 U OF CAL IRVINE	6,776	5,949	0	0	365E	93E	369	0
105 CLEMSON UNIVERSITY	6,744	2,260	3,939	7	237	179	58	64
106 UNIVERSITY OF OREGON	6,697	6,361	0	0	42	0	63	231
107 MONTANA STATE UNIVERSITY	6,692	2,450	2,300	0	4	321	1,584	33
108 UNIVERSITY OF WYOMING	6,678	4,531	1,298	671	41	137	0	0
109 UNIVERSITY OF DENVER	6,611	5,437	234	55	121	640	85	39
110 BRANDEIS UNIVERSITY	6,601	5,814	3	0	235	549	0	0
TOTAL 1ST 110 INSTS.	2,511,393	1,756,623	237,313	10,340	106,967	68,002	274,060	58,088
111 ALBANY MED COL OF UNION U	6,598	3,127	522	75	665	452	1,500	257
112 U OF ILL MEDICAL CENTER	6,554	4,330	1,194	87	376	97	199	271
113 U TEX GALVESTON MED BRAN	6,534	4,224	1,142	0	914	97	0	157
114 UNIV OF MAINE ORONO	6,438	4,307	310	10	89	253	1,469	0
115 UNIVERSITY OF DAYTON	6,395	6,067	1	65	26	73	102	61
116 WAYNE STATE UNIVERSITY	6,386	3,741	70	22	432	305	1,609	207
117 UNIV OF MISSISSIPPI	6,278	3,865	645	2	617	373	690	86
118 U TEX HLTH SCI CTR DALLAS	6,258	4,941	0	0	762	354	20	181
119 U OF OREGON MED SCHOOL	6,036E	4,571E	21E	0	736E	14E	484E	210E
120 UNIV OKLAHOMA	5,937E	4,797E	524E	0	114E	81	255	166
TOTAL 1ST 120 INSTS.	2,574,807	1,800,593	241,742	10,601	111,698	70,101	280,388	59,684
121 RICE UNIVERSITY	5,927	4,971	0	0	952	0	4	0
122 UNIVERSITY OF DELAWARE	5,760	3,500	631	0	498	219	872	40
123 SUNY DOWNSTATE MED CTR	5,568	4,126	14	242	400	101	0	685
124 ST LOUIS UNIV	5,548	4,771	244	4	146	163	80E	140E
125 RENSSELAER POLY INST	5,382E	4,796E	100E	0	16E	239E	231E	0
126 SUNY ALBANY	5,263	4,125	191	0	30	313	518	86
127 NORTH DAKOTA STATE UNIV	5,263	1,480	2,725	0	17	224	0	817
128 INDIANA UNIV NORTHWEST	5,082	5,077	0	0	0	0	5	0
129 THE MED COLL OF WISCONSIN	5,066	3,37	113E	3	990E	316E	0	272E
130 U OF CAL SANTA BARBARA	4,939	4,14	114	0	115E	0	564	0
TOTAL 1ST 130 INSTS.	2,628,605	1,840,957	245,874	10,850	114,862	71,676	282,662	61,724
131 DARTMOUTH COLLEGE	4,918	4,501	4	0	171	86	196	0
132 THOM JEFFERSON UNIV HOSP	4,847	3,873	0	0	795	179	0	0
133 UNIV OF MO SYSTEM OFC	4,706	2,368	578	0	98	0	1,662	0
134 LEHIGH UNIVERSITY	4,654	3,274	388	8	34	607	343	0
135 NEW YORK MEDICAL COLLEGE	4,615	3,550	10	115	721	171	0	48
136 UNIVERSITY OF NOTRE DAME	4,527	4,096	3E	2E	250E	157E	0	19E
137 RUSH MEDICAL COLLEGE	4,485	2,792	74	0	155	304	926	234
138 SOUTH DAKOTA STATE UNIV	4,472	1,596	2,347	0	3	110	416	0
139 BOSTON COLLEGE	4,182E	2,552E	138E	232E	322E	66E	804E	68E
140 U TENNESSEE KNOXVILLE	4,067	3,555	143	35	68	111	127	28
TOTAL 1ST 140 INSTS.	2,674,078	1,873,114	249,559	11,242	117,479	73,427	287,136	62,121
141 UNIV OF MISSOURI ROLLA	4,059	2,200	4	0	0	121	1,718	16
142 TEXAS TECH UNIVERSITY	4,037	938	2,034	0	322	132	4	607
143 UNIV OF NEW HAMPSHIRE	3,856	2,846	429	0	28	5	262	286
144 U TEX HLTH SCI CT HOUSTON	3,813	3,284	302	2	218	26	236	45

[illegible]	[illegible]	2,260	3,939	7	237	179	58	64
106 UNIVERSITY OF OREGON	6,697	6,361	0	0	42	0	63	231
107 MONTANA STATE UNIVERSITY	6,692	2,450	2,300	0	4	321	1,584	33
108 UNIVERSITY OF WYOMING	6,678	4,531	1,298	671	41	137	0	0
109 UNIVERSITY OF DENVER	6,611	5,437	234	55	121	640	85	39
110 BRANDEIS UNIVERSITY	6,601	5,814	3	0	235	549	0	0
TOTAL 1ST 110 INSTS.	2,511,393	1,756,621	237,313	10,340	106,967	68,002	274,060	58,088
111 ALBANY MED COL OF UNION U	6,598	3,127	522	75	665	452	1,500	257
112 U OF ILL MEDICAL CENTER	6,554	4,330	1,194	87	376	97	199	271
113 U TEX GALVESTON MED BRAN	6,534	4,224	1,142	0	914	97	0	157
114 UNIV OF MAINE ORONO	6,438	4,307	310	10	89	253	1,469	0
115 UNIVERSITY OF DAYTON	6,395	6,067	1	65	26	73	102	61
116 WAYNE STATE UNIVERSITY	6,386	3,741	70	22	432	305	1,609	207
117 UNIV OF MISSISSIPPI	6,278	3,865	645	2	617	373	690	86
118 U TEX HLTH SCI CTR DALLAS	6,258	4,941	0	0	762	354	20	181
119 U OF OREGON MED SCHOOL	6,036E	4,571E	21E	0	736E	14E	484E	210E
120 UNIV OKLAHOMA	5,937E	4,797E	524E	0	114E	81	255	166
TOTAL 1ST 120 INSTS.	2,574,807	1,800,593	241,742	10,601	111,698	70,101	280,388	59,684
121 RICE UNIVERSITY	5,927	4,971	0	0	952	0	4	0
122 UNIVERSITY OF DELAWARE	5,760	3,500	631	0	498	219	872	40
123 SUNY DOWNSTATE MED CTR	5,568	4,126	14	242	400	101	0	685
124 ST LOUIS UNIV	5,548	4,771	244	4	146	163	80E	140E
125 RENSSELAER POLY INST	5,382E	4,796E	100E	0	16E	239E	231E	0
126 SUNY ALBANY	5,263	4,125	191	0	30	313	518	86
127 NORTH DAKOTA STATE UNIV	5,263	1,480	2,725	0	17	224	0	817
128 INDIANA UNIV NORTHWEST	5,082	5,077	0	0	0	0	5	0
129 THE MED COLL OF WISCONSIN	5,066	3,372	113E	3	990E	316E	0	272E
130 U OF CAL SANTA BARBARA	4,939	4,146	114	0	115E	0	564	0
TOTAL 1ST 130 INSTS.	2,628,605	1,840,957	245,874	10,850	114,862	71,676	282,662	61,724
131 DARTMOUTH COLLEGE	4,918	4,501	4	0	171	46	196	0
132 THOM JEFFERSON UNIV HOSP	4,847	3,873	0	0	795	179	0	0
133 UNIV OF MO SYSTEM OFC	4,706	2,368	578	0	98	0	1,662	0
134 LEHIGH UNIVERSITY	4,654	3,274	388	8	34	607	343	0
135 NEW YORK MEDICAL COLLEGE	4,615	3,550	10	115	721	171	0	48
136 UNIVERSITY OF NOTRE DAME	4,527	4,096	3E	2E	250E	157E	0	19E
137 RUSH MEDICAL COLLEGE	4,485	2,792	74	0	155	304	926	234
138 SOUTH DAKOTA STATE UNIV	4,472	1,596	2,347	0	3	110	416	0
139 BOSTON COLLEGE	4,182E	2,552E	138E	232E	322E	66E	804E	68E
140 U TENNESSEE KNOXVILLE	4,067	3,555	143	35	68	111	127	28
TOTAL 1ST 140 INSTS.	2,674,078	1,873,114	249,559	11,242	117,479	73,427	287,136	62,121
141 UNIV OF MISSOURI ROLLA	4,059	2,200	4	0	0	121	1,718	16
142 TEXAS TECH UNIVERSITY	4,037	938	2,034	0	322	132	4	607
143 UNIV OF NEW HAMPSHIRE	3,856	2,846	429	0	28	5	262	286
144 U TEX HLTH SCI CR HOUSTON	3,812	2,884	382	3	218	36	235	54
145 U OF NEB MED C AT OMAHA	3,706E	2,984E	2E	0	166E	34E	490E	30E
146 WAKE FOREST UNIVERSITY	3,701E	3,180E	7E	0	161E	150E	187E	16E
147 HOWARD UNIVERSITY	3,680E	2,863E	46E	0	290E	109E	0	372E
148 U OF WIS MILWAUKEE	3,665	1,149	1,215	0	158	71	964	108
149 S U N Y SYSTEM OFFICE	3,572	2,812	287I	10I	69I	61I	290I	43I
150 STEVENS INSTITUTE OF TECH	3,498	2,220	95	0	0	999	184	0
TOTAL 1ST 150 INSTS.	2,711,664	1,897,190	254,060	11,255	118,891	75,145	291,470	63,653

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTITUTIONS' OWN FUNDS	OTHER
151 COL OF MED & DENT OF N J	3,457	2,902	56	1	371	127	0	0
152 GEO PEABODY COL TEACHERS	3,378	3,162	14	0	159E	0	43	0
153 U PUERTO RICO SAN JUAN	3,300E	3,080E	11E	0	22E	55E	28E	104E
154 U TEX HLTH SCI CR SAN ANT	3,285	2,599	52	24	374	142	0	94
155 POLYTECHNIC INST OF N Y	3,239	3,012	18	54	155	0	0	0
156 U OF NEV DESERT RES INST	3,239	2,216	226	18	115	375	245	44
157 LA ST U MED CTR N ORLEANS	3,231	2,060	225	0	547	187	212	0
158 HAHNEMAN MEDICAL COLLEGE	3,111	2,517	0	40	151	78	0	325
159 UNIV OF NEVADA - RENO	3,049	1,239	1,066	0	25	64	646	9
160 UNIVERSITY OF HOUSTON	3,044	2,436	183	6	246	1	40	132
TOTAL 1ST 160 INSTS.	2,743,997	1,922,413	255,911	11,398	121,056	76,174	292,684	64,361
161 US NAVAL POSTGRAD SCHOOL	2,925	2,925	0	0	0	0	0	0
162 SAN DIEGO ST UNIVERSITY	2,842	2,272	229E	149E	90	98	0	4
163 a/	2,836C	2,381	46	0	68	4	277	60
164 ILLINOIS INST OF TECH	2,834	2,571	51E	0	36E	66E	74	36E
165 SUNY COL OF ENV SCI & FOR	2,808	899	106	0	114	168	1,388	133
166 U OF CAL SANTA CRUZ	2,769	1,715	0	0	138E	0	916	0
167 SOUTHERN ILLINOIS UNIV	2,754	580	1,648	0	0	56	211	259
168 UNIVERSITY OF LOUISVILLE	2,751	1,887	71	80	404	90	219	0
169 MEDICAL COLL OF GEORGIA	2,724	1,917	83	210	271	118	125	0
170 BRIGHAM YOUNG UNIVERSITY	2,698E	1,368E	383E	16E	163E	304E	418E	46E
TOTAL 1ST 170 INSTS.	2,771,938	1,940,928	258,528	11,853	122,340	77,078	296,312	64,899
171 NC AG & TECH STATE UNIV	2,695	2,145	136	0	262	123	0	29
172 U PUERTO RICO MAYAGUEZ	2,670	2,416	86	0	20	38	110	0
173 N MEX INST MINING & TECH	2,534	1,460E	774	0	0	243E	57	0
174 CATHOLIC UNIV OF AMERICA	2,488	2,155	0	0	0	0	333	0
175 DREXEL UNIVERSITY	2,358E	1,904E	51I	10I	136I	66I	128I	63I
176 MED UNIV OF SO CAROLINA	2,305	1,739	204	0	142	191	0	29
177 U OF ARKANSAS MED CENTER	2,249	1,766	0	0	67	32	384	0
178 U OF MO K C	2,247	1,592	7	15	0	121	429	83
179 ARIZONA STATE UNIVERSITY	2,242	1,345	95	9	121	95	577	0
180 MICHIGAN TECH UNIVERSITY	2,207	460	73	0	12	260	1,376	26
TOTAL 1ST 180 INSTS.	2,795,933	1,957,910	259,954	11,887	123,100	78,247	299,706	65,129
181 AMERICAN UNIVERSITY THE	2,143	2,112	10	0	16	5	0	0
182 ADELPHI UNIV	2,134	1,814	195	85	0	0	40	0
183 U OF CAL UNIV-WIDE PROGS	1,991	50	10	0	0	0	1,931	0
184 SUNY COLLEGE BROCKPORT	1,985	1,465	56E	0	42E	6E	416	0
185 INSTITUTE PAPER CHEMISTRY	1,970	93	0	0	0	1,288	589	0
186 UNIV OF SOUTH FLORIDA	1,956	1,087	115	1	11	324	311	107
187 SOUTHERN METHODIST UNIV	1,910	1,518	0	0	73	21	298	0
188 MEHARRY MEDICAL COLLEGE	1,903E	1,790E	0	0	68E	45E	0	0
189 UNIV OF SOUTH CAROLINA	1,841	792	685	2	210	24	111	17
190 CUNY CITY COLLEGE	1,833E	1,384E	169I	6I	42I	36I	171I	25I
TOTAL 1ST 190 INSTS.	2,815,599	1,970,015	261,194	11,981	123,562	79,996	303,573	65,278
191 OLD DOMINION UNIVERSITY	1,828	1,238	5	28	16	11	527	12

153 U PUERTO RICO SAN JUAN	3,300E	3,080E	11E	0	22E	55E	28E	104E
154 U TEX HLTH SCI CR SAN ANT	3,285	2,599	52	24	374	142	0	94
155 POLYTECHNIC INST OF N Y	3,239	3,012	18	54	155	0	0	0
156 U OF NEV DESERT RES INST	3,239	2,216	226	18	115	375	245	44
157 LA ST U MED CTR N ORLEANS	3,231	2,060	225	0	547	187	212	0
158 HAHNEMAN MEDICAL COLLEGE	3,111	2,517	0	40	151	78	0	325
159 UNIV OF NEVADA - RENO	3,049	1,239	1,066	0	25	64	646	9
160 UNIVERSITY OF HOUSTON	3,044	2,436	183	6	246	1	40	132
TOTAL 1ST 160 INSTS.	2,743,997	1,922,413	255,911	11,398	121,056	76,174	292,684	64,361
161 US NAVAL POSTGRAD SCHOOL	2,925	2,925	0	0	0	0	0	0
162 SAN DIEGO ST UNIVERSITY	2,842	2,272	229E	149E	90	98	0	4
163 a/	2,836C	2,381	46	0	68	4	277	60
164 ILLINOIS INST OF TECH	2,834	2,571	51E	0	36E	66E	74	36E
165 SUNY COL OF ENV SCI & FOR	2,808	899	106	0	114	168	1,388	133
166 U OF CAL SANTA CRUZ	2,769	1,715	0	0	138E	0	916	0
167 SOUTHERN ILLINOIS UNIV	2,754	580	1,648	0	0	56	211	259
168 UNIVERSITY OF LOUISVILLE	2,751	1,887	71	80	404	90	219	0
169 MEDICAL COLL OF GEORGIA	2,724	1,917	83	210	271	118	125	0
170 BRIGHAM YOUNG UNIVERSITY	2,698E	1,368E	383E	16E	163E	304E	418E	46E
TOTAL 1ST 170 INSTS.	2,771,938	1,940,928	258,528	11,853	122,340	77,078	296,312	64,899
171 NC AG & TECH STATE UNIV	2,695	2,145	136	0	262	123	0	29
172 U PUERTO RICO MAYAGUEZ	2,670	2,416	86	0	20	38	110	0
173 N MEX INST MINING & TECH	2,534	1,460E	774	0	0	243E	57	0
174 CATHOLIC UNIV OF AMERICA	2,488	2,155	0	0	0	0	333	0
175 DREXEL UNIVERSITY	2,358E	1,904E	51I	10I	136I	66I	128I	63I
176 MED UNIV OF SO CAROLINA	2,305	1,739	204	0	142	191	0	29
177 U OF ARKANSAS MED CENTER	2,249	1,766	0	0	67	32	384	0
178 U OF MO K C	2,247	1,592	7	15	0	121	429	83
179 ARIZONA STATE UNIVERSITY	2,242	1,345	95	9	121	95	577	0
180 MICHIGAN TECH UNIVERSITY	2,207	460	73	0	12	260	1,376	26
TOTAL 1ST 180 INSTS.	2,795,933	1,957,910	259,954	11,887	123,100	78,247	299,706	65,129
181 AMERICAN UNIVERSITY THE	2,143	2,112	10	0	16	5	0	0
182 ADELPHI UNIV	2,134	1,814	195	85	0	0	40	0
183 U OF CAL UNIV-WIDE PRGMS	1,991	50	10	0	0	0	1,931	0
184 SUNY COLLEGE BROCKPORT	1,985	1,465	56E	0	42E	6E	416	0
185 INSTITUTE PAPER CHEMISTRY	1,970	93	0	0	0	1,288	589	0
186 UNIV OF SOUTH FLORIDA	1,956	1,087	115	1	11	324	311	107
187 SOUTHERN METHODIST UNIV	1,910	1,518	0	0	73	21	298	0
188 MEHARRY MEDICAL COLLEGE	1,903E	1,790E	0	0	68E	45E	0	0
189 UNIV OF SOUTH CAROLINA	1,841	792	685	2	210	24	111	17
190 CUNY CITY COLLEGE	1,833E	1,384E	169I	6I	42I	36I	171I	25I
TOTAL 1ST 190 INSTS.	2,815,599	1,970,015	261,194	11,981	123,562	79,996	303,573	65,278
191 OLD DOMINION UNIVERSITY	1,829	1,234	5	24	16	11	527	12
192 ANTIOCH COLLEGE	1,809E	1,575E	23I	6I	63I	27I	106I	9I
193 UNIV OF ILL CHICAGO CIR	1,775	1,380	94	0	46	2	221	32
194 MED COLL OHIO AT TOLEDO	1,740	1,521	0	0	75	0	0	144
195 WORCESTER POLY INSTITUTE	1,686	467	105	0	0	1,091	23	0
196 UNIVERSITY OF MONTANA	1,647E	792E	418E	0	0	437E	0	0
197 NEW MEXICO HIGHLANDS UNIV	1,592	1,239	86	0	154	0	72	41
198 CUNY GRADUATE DIVISION	1,567	991	0	264	189	41	78	4
199 OHIO UNIVERSITY	1,497	897	26	1	22	141	410	0
200 UNIV ALABAMA HUNTSVILLE	1,487	1,310	50	20	18	35	38	16
TOTAL 1ST 200 INSTS.	2,832,228	1,981,421	262,001	12,296	124,145	81,781	305,048	65,536

a/CONFIDENTAL

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973
CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
201 TUSKEGEE INSTITUTE	1,479E	1,349E	13I	3I	35I	15I	59I	5I
202 LOYOLA UNIVERSITY	1,436	1,175	57	0	109	59	5	31
203 UNIV OF NORTH DAKOTA	1,400	1,023	132E	0	68E	48E	91	38E
204 COLORADO SCHOOL OF MINES	1,380	1,366	14	0	0	0	0	0
205 S DAK SCH MINES & TECH	1,317	881	75	38	1	79	51	192
206 THE MED COLL OF PENNA	1,313	1,081	0	0	78	137	0	17
207 TEXAS CHRISTIAN UNIV	1,308	866	109	51	92	50	140	0
208 UNIV ALABAMA UNIVERSITY	1,245	875	205	0	0	24	118	23
209 TRINITY UNIVERSITY	1,217	734	43	62	162	0	216	0
210 FORDHAM UNIVERSITY	1,174	636	0	462	32	12	32	0
TOTAL 1ST 210 INSTS.	2,845,497	1,991,407	262,649	12,912	124,722	82,205	305,760	65,842
211 WESLEYAN UNIVERSITY	1,173	777	62	1	165	11	151	6
212 WENTWORTH INSTITUTE	1,142	1,082	0	0	15	0	43	2
213 US AIR FORCE ACADEMY	1,134	1,134	0	0	0	0	0	0
214 NOVA UNIVERSITY	1,126	910	0	0	88	0	0	128
215 CLARKSON COL OF TECH	1,095	855	0	0	7E	46E	185E	2E
216 KENT STATE UNIVERSITY	1,080	698	37	0	17	8	314	6
217 GALLAUDET COLLEGE	1,052	584	0	0	0	0	420	48
218 CUNY QUEENS COLLEGE	1,047E	590E	140I	16I	68I	47I	161I	25I
219 LOMA LINDA UNIVERSITY	1,044	638	0	0	221	75	0	110
220 CALIF ST UNIV FULLERTON	1,041	982	40	0	19	0	0	0
TOTAL 1ST 220 INSTS.	2,856,431	1,999,657	262,928	12,929	125,322	82,392	307,034	66,169
221 UNIV OF SOUTH ALABAMA	985	774	163	0	29	0	18	1
222 U PUERTO RICO RIO PIEDRAS	980E	178E	303I	11I	73I	63I	307I	45I
223 UNIV OF STHRN MISSISSIPPI	937	402	19	0	11	101	404	0
224 UNIVERSITY OF SANTA CLARA	935	773	6	0	6	4	27	119
225 UNIV OF TEX AT ARLINGTON	932	167	578	6	99	13	41	28
226 KENTUCKY STATE UNIV	931E	596	56I	62I	29I	61I	118I	9I
227 UNIVERSITY OF THE PACIFIC	924E	381E	99E	0	321E	19E	104E	0
228 UNIV OF SOUTH DAKOTA	922	425	130	0	59	11	131	166
229 SETON HALL UNIVERSITY	895	600	100	0	70	5	120	0
230 UNIV OF MO ST LOUIS	889	383	0	0	19	3	468	16
TOTAL 1ST 230 INSTS.	2,865,761	2,004,336	264,382	13,008	126,038	82,672	308,772	66,553
231 BOWLING GREEN STATE UNIV	849	442	0	0	87	28	291	0
232 MARQUETTE UNIVERSITY	839	480	5	17	49	23	189	76
233 UNIV OF MASS BOSTON	832I	832E	0	0	0	0	0	0
234 SUNY BINGHAMTON	806E	646E	61I	2I	15I	12I	61I	9I
235 FAIRLEIGH DICKINSON UNIV	804	182	143	298	28	98	19	36
236 U HLTH SCI/CHCGO MED SCH	798	494	61	0	108	19	107	9
237 FLORIDA TECH UNIV	797	391	192	36	2	3	173	0
238 NORTH TEXAS STATE UNIV	793	24	568	0	0	0	0	201
239 UNIV OF N C AT GREENSBORO	789	535	118	20	13	7	92	4
240 S ILLINOIS U EDWARDSVILLE	788	255	37	0	30	0	466	0
TOTAL 1ST 240 INSTS.	2,873,855	2,008,617	265,567	13,381	126,370	82,862	310,170	66,888
241 WICHITA STATE UNIVERSITY	783	324	46	100	11	79	190	33
242 NEW ENGLAND INSTITUTE	778	142	0	0	298	24	292	22
243 AMHERST COLLEGE	744	695	0	0	49	0	0	0

206 THE MED COLL OF PENNA	1,313	1,081	0	0	78	137	0	17
207 TEXAS CHRISTIAN UNIV	1,308	866	109	51	92	50	140	0
208 UNIV ALABAMA UNIVERSITY	1,245	875	205	0	0	24	118	23
209 TRINITY UNIVERSITY	1,217	734	43	62	162	0	216	0
210 FORDHAM UNIVERSITY	1,174	636	0	462	32	12	32	0
TOTAL 1ST 210 INSTS.	2,845,497	1,991,407	262,649	12,912	124,722	82,205	305,760	65,842
211 WESLEYAN UNIVERSITY	1,173	777	62	1	165	11	151	6
212 WENTWORTH INSTITUTE	1,142	1,082	0	0	15	0	43	2
213 US AIR FORCE ACADEMY	1,134	1,134	0	0	0	0	0	0
214 NOVA UNIVERSITY	1,126	910	0	0	88	0	0	128
215 CLARKSON COL OF TECH	1,095	855	0	0	78	46E	185E	2E
216 KENT STATE UNIVERSITY	1,080	698	37	0	17	8	314	6
217 GALLAUDET COLLEGE	1,052	584	0	0	0	0	420	48
218 CUNY QUEENS COLLEGE	1,047E	590E	140I	16I	68I	47I	161I	25I
219 LOMA LINDA UNIVERSITY	1,044	638	0	0	221	75	0	110
220 CALIF ST UNIV FULLERTON	1,041	982	40	0	19	0	0	0
TOTAL 1ST 220 INSTS.	2,856,431	1,999,657	262,928	12,929	125,322	82,392	307,034	66,169
221 UNIV OF SOUTH ALABAMA	985	774	163	0	29	0	18	1
222 U PUERTO RICO RIO PIEDRAS	980E	178E	303I	11I	73I	63I	307I	45I
223 UNIV OF STHRN MISSISSIPPI	937	402	19	0	11	101	404	0
224 UNIVERSITY OF SANTA CLARA	935	773	6	0	6	4	27	119
225 UNIV OF TEX AT ARLINGTON	932	167	578	6	99	13	41	28
226 KENTUCKY STATE UNIV	931E	596	56I	62I	29I	61I	118I	9I
227 UNIVERSITY OF THE PACIFIC	924E	381E	99E	0	321E	19E	104E	0
228 UNIV OF SOUTH DAKOTA	922	425	130	0	59	11	131	166
229 SETON HALL UNIVERSITY	895	600	100	0	70	5	120	0
230 UNIV OF MO ST LOUIS	889	383	0	0	19	3	468	16
TOTAL 1ST 230 INSTS.	2,865,761	2,004,336	264,382	13,008	126,038	82,672	308,772	66,553
231 BOWLING GREEN STATE UNIV	848	442	0	0	87	28	291	0
232 MARQUETTE UNIVERSITY	839	480	5	17	49	23	189	76
233 UNIV OF MASS BOSTON	832E	832E	0	0	0	0	0	0
234 SUNY BINGHAMTON	806E	646E	61I	2I	15I	12I	61I	9I
235 FAIRLEIGH DICKINSON UNIV	804	182	143	298	28	98	19	36
236 U HLTH SCI/CHCGO MED SCH	798	494	61	0	108	19	107	9
237 FLORIDA TECH UNIV	797	391	192	36	2	3	173	0
238 NORTH TEXAS STATE UNIV	793	24	568	0	0	0	0	201
239 UNIV OF N C AT GREENSBORO	789	535	118	20	13	7	92	4
240 S ILLINOIS U EDWARDSVILLE	788	255	37	0	30	0	466	0
TOTAL 1ST 240 INSTS.	2,873,855	2,008,617	265,567	13,381	126,370	82,862	310,170	66,888
241 WICHITA STATE UNIVERSITY	783	324	46	100	11	79	190	33
242 NEW ENGLAND INSTITUTE	778	142	0	0	298	24	292	22
243 AMHERST COLLEGE	744	695	0	0	49	0	0	0
244 WESTERN MICHIGAN UNIV	739	518	9	11	2	53	121	25
245 UNIV OF TEXAS AT EL PASO	720	520	0	4	129	29	38	0
246 US NAVAL ACADEMY	703	703	0	0	0	0	0	0
247 STEPHEN F AUSTIN ST UNIV	698	435	195	4	23	1	40	0
248 UNIV OF SAN FRANCISCO	688E	431E	25I	6I	70I	29I	117I	10I
249 MEMPHIS STATE UNIVERSITY	681	245	45	35	2	1	341	12
250 ROCHESTER INST TECHNOLOGY	675	78	0	0	215	29	353	0
TOTAL 1ST 250 INSTS.	2,881,064	2,012,708	265,887	13,541	127,169	83,107	311,662	66,990

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
251 COLLEGE OF WILLIAM & MARY	669	587	6	0	22	2	52	0
252 SUNY COLLEGE BUFFALO	668	401	10	0	7	207	43	0
253 EAST CAROLINA UNIVERSITY	664	159	449	12	2	5	0	37
254 GEORGIA STATE UNIV	657	273	128	2	105	0	147	2
255 NEW SCH FOR SOC RESEARCH	646E	146E	10E	0	480E	3E	7E	0
256 SUNY COLLEGE OSWEGO	632	353	20	0	36	209	0	14E
257 TEXAS WOMANS UNIVERSITY	627E	109E	407E	0	58E	0	53E	0
258 CALIF STATE UNIV LONG BCH	621E	372E	76I	9I	37I	25I	88I	14I
259 SUNY COLLEGE FREDONIA	602	286	163	41	49	0	63	0
260 FAIRFIELD UNIVERSITY	560	329	1	0	34	0	196	0
TOTAL 1ST 260 INSTS.	2,887,410	2,015,723	267,157	13,605	127,999	83,558	312,311	67,057
261 CLARK UNIVERSITY	559	446	1	0	12	0	70	30
262 FLORIDA INST OF TECH	556	396	0	0	77	29	54	0
263 LA ST U NEW ORLEANS	550	9	541	0	0	0	0	0
264 CREIGHTON UNIVERSITY	545	358	0	0	59	51	56	21
265 OAKLAND UNIVERSITY	532	460	0	0	8	1	60	3
266 UNIVERSITY OF TOLEDO	531	269	12	117	12	24	88	9
267 FLORIDA ATLANTIC UNIV	524	524	0	0	0	0	0	0
268 TEXAS A & I UNIVERSITY	518	23	375	0	73	16	0	31
269 NORTHERN ILLINOIS UNIV	506	437	31	0	0	0	0	38
270 CALIF STATE UNIV FRESNO	503	429	55	0	0	19	0	0
TOTAL 1ST 270 INSTS.	2,892,734	2,019,074	268,172	13,722	128,240	83,698	312,639	67,189
271 MIAMI UNIVERSITY	498	328	18	0	58	0	89	5
272 SAN JOSE ST UNIV	490	384	0	0	54	12	25	15
273 FLORIDA A & M UNIVERSITY	490	407	8	0	0	0	75	0
274 LONG ISLAND UNIVERSITY	485E	328E	15I	3I	43I	18I	71I	7I
275 BRYN MAWR COLLEGE	483	415	36	0	32	0	0	0
276 WSTRN KENTUCKY UNIVERSITY	475	104	279	0	3	7	38	44
277 INST TEXTILE TECHNOLOGY	450	0	0	0	0	400	0	50
278 CLARION STATE COLLEGE	448	143	186E	0	0	0	119E	0
279 HAVERFORD COLLEGE	441	384	0	0	12	0	45	0
280 SOUTHERN UNIV	438E	438E	0	0	0	0	0	0
TOTAL 1ST 280 INSTS.	2,897,432	2,022,005	268,714	13,725	128,442	84,135	313,101	67,310
281 NEWARK COL OF ENGINEERING	431	145	33	0	31	61	161	0
282 DUQUESNE UNIVERSITY	426	395	10	0	20	1	0	0
283 PORTLAND STATE UNIV	424	273	2	40	6	5	98	0
284 WESTERN WASHINGTON ST COL	423	327	25	0	3	8	51	9
285 BAYLOR UNIVERSITY	422	171	27	0	166	1	37	20
286 LOUISIANA TECH UNIV	420	200	61	0	15	24	120	0
287 WRIGHT STATE UNIV	419	367	0	0	52	0	0	0
288 MANHATTAN COLLEGE	397	305	0	0	0	56	0	36
289 COLUMBIA UNIV TCHRS COL	396	282	0	0	57	0	15	42
290 UNIVERSITY OF TULSA	381	167	0	6	0	122	86	0
TOTAL 1ST 290 INSTS.	2,901,571	2,024,637	268,872	13,771	128,792	84,413	313,669	67,417

252 SUNY COLLEGE BUFFALO	668	401	10	0	7	207	43	0
253 EAST CAROLINA UNIVERSITY	664	159	449	12	2	5	0	37
254 GEORGIA STATE UNIV	657	273	128	2	105	0	147	2
255 NEW SCH FOR SOC RESEARCH	646E	146E	10E	0	480E	3E	7E	0
256 SUNY COLLEGE OSWEGO	632	353	20	0	36	209	0	14E
257 TEXAS WOMANS UNIVERSITY	627E	109E	407E	0	58E	0	53E	0
258 CALIF STATE UNIV LONG BCH	621E	372E	76I	9I	37I	25I	88I	14I
259 SUNY COLLEGE FREDONIA	602	286	163	41	49	0	63	0
260 FAIRFIELD UNIVERSITY	560	329	1	0	34	0	196	0
TOTAL 1ST 260 INSTS.	2,887,410	2,015,723	267,157	13,605	127,999	83,558	312,311	67,057
261 CLARK UNIVERSITY	559	446	1	0	12	0	70	30
262 FLORIDA INST OF TECH	556	396	0	0	77	29	54	0
263 LA ST U NEW ORLEANS	550	9	541	0	0	0	0	0
264 CREIGHTON UNIVERSITY	545	358	0	0	59	51	56	21
265 OAKLAND UNIVERSITY	532	460	0	0	8	1	60	3
266 UNIVERSITY OF TOLEDO	531	269	12	117	12	24	88	9
267 FLORIDA ATLANTIC UNIV	524	524	0	0	0	0	0	0
268 TEXAS A & I UNIVERSITY	518	23	375	0	73	16	0	31
269 NORTHERN ILLINOIS UNIV	506	437	31	0	0	0	0	38
270 CALIF STATE UNIV FRESNO	503	429	55	0	0	19	0	0
TOTAL 1ST 270 INSTS.	2,892,734	2,019,074	268,172	13,722	128,240	83,698	312,639	67,189
271 MIAMI UNIVERSITY	498	328	18	0	58	0	89	5
272 SAN JOSE ST UNIV	490	384	0	0	54	12	25	15
273 FLORIDA A & M UNIVERSITY	490	407	8	0	0	0	75	0
274 LONG ISLAND UNIVERSITY	485E	328E	15I	3I	43I	18I	71I	7I
275 BRYN MAWR COLLEGE	483	415	36	0	32	0	0	0
276 WSTRN KENTUCKY UNIVERSITY	475	104	279	0	3	7	38	44
277 INST TEXTILE TECHNOLOGY	450	0	0	0	0	400	0	50
278 CLARION STATE COLLEGE	448	143	186E	0	0	0	119E	0
279 HAVERFORD COLLEGE	441	384	0	0	12	0	45	0
280 SOUTHERN UNIV	438E	438E	0	0	0	0	0	0
TOTAL 1ST 280 INSTS.	2,897,432	2,022,005	268,714	13,725	128,442	84,135	313,101	67,310
281 NEWARK COL OF ENGINEERING	431	145	33	0	31	61	161	0
282 DUQUESNE UNIVERSITY	426	395	10	0	20	1	0	0
283 PORTLAND STATE UNIV	424	273	2	40	6	5	98	0
284 WESTERN WASHINGTON ST COL	423	327	25	0	3	8	51	9
285 BAYLOR UNIVERSITY	422	171	27	0	166	1	37	20
286 LOUISIANA TECH UNIV	420	200	61	0	15	24	120	0
287 WRIGHT STATE UNIV	419	367	0	0	52	0	0	0
288 MANHATTAN COLLEGE	397	305	0	0	0	56	0	36
289 COLUMBIA UNIV TCHRS COL	396	282	0	0	57	0	15	42
290 UNIVERSITY OF TULSA	381	167	0	6	0	122	86	0
TOTAL 1ST 290 INSTS.	2,901,571	2,024,637	268,872	13,771	128,792	84,413	313,669	67,417
291 WILLIAMS COLLEGE	380	260	0	0	97	18	0	5
292 EMMANUEL COLLEGE	377	377	0	0	0	0	0	0
293 OREGON COLLEGE OF EDUC	377	334	6	37	0	0	0	0
294 CUNY BROOKLYN COLLEGE	373E	301E	27I	1I	7I	6I	27I	4I
295 THE UNIVERSITY OF AKRON	371	251	0	0	6	91	4	19
296 CALIF STATE UNIV LA	356	268	0	43	13	1	8	23
297 JACKSON STATE COLLEGE	352	294	7	0	6	1	44	0
298 GRAMBLING COLLEGE	340	300	0	0	0	0	40	0
299 BUCKNELL UNIVERSITY	340	185	87	0	29	11	28	0
300 REED COLLEGE	336	285	0	0	39	3	9	0
TOTAL 1ST 300 INSTS.	2,905,173	2,027,492	268,999	13,852	128,989	84,544	313,829	67,468

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973
CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTITUTIONS' OWN FUNDS	OTHER
301 CLEVELAND STATE UNIV	329	140	0	49	18	7	115	0
302 UNION COLLEGE	327	68	0	0	190	32	37	0
303 MONT COL MINRL SCI & TECH	315	123	24	0	108	43	0	17
304 SOUTHERN ARIZONA UNIV	315	68	162	0	0	85	0	4
305 a/	313C	231	20	0	0	28	0	34
306 SUNY COLLEGE CORTLAND	308	215	0	0	65	23	25	0
307 VILLANOVA UNIVERSITY	307	249	0	0	0	37	21	0
308 INDIANA STATE UNIVERSITY	307	214	44	0	26	1	22	0
309 MACALESTER COLLEGE	305	147	0	0	3	4	31	120
310 TENN TECHNOLOGICAL UNIV	302	227	42	2	0	1	30	0
TOTAL 1ST 310 INSTS.	2,908,301	2,029,170	269,291	13,903	129,379	84,805	314,110	67,643
311 UNIVERSITY OF DETROIT	302	59	0	0	93	149	0	1
312 NEW YORK INST TECH	298	93	0	0	0	0	205	0
313 DRAKE UNIVERSITY	294	181	0	0	36	28	49	0
314 MURRAY STATE UNIVERSITY	290	283	0	0	0	0	0	7
315 UNIV OF MASS MED SCHOOL	288	271	0	0	17	0	0	0
316 EAST TEXAS STATE UNIV	284	18	100	0	56	0	110	0
317 U OF WIS GREEN BAY	281	157	0	0	9	60	36	19
318 FRANKLIN & MARSHALL COL	277	252	16	0	0	0	0	9
319 REGIS COLLEGE	273	273	0	0	0	0	0	0
320 RIDER COLLEGE	273E	32E	11I	1I	85I	25I	83I	36I
TOTAL 1ST 320 INSTS.	2,911,161	2,030,789	269,418	13,904	129,675	85,067	314,593	67,715
321 VIRGINIA STATE COLLEGE	272	262	0	0	0	0	10	0
322 POMONA COLLEGE	270	157	0	0	61	0	52	0
323 SAN FRANCISCO ST UNIV	267	182	6	0	0	26	0	53
324 WRIGHT INSTITUTE	262	139	0	0	75	0	14	34
325 AUSTIN COLLEGE	253	169	25	0	46	0	12	1
326 COL VIRGIN ISLAND	246	19	0	205	6	16	0	0
327 ALCORN A & M COLLEGE	245	210	0	0	0	0	35	0
328 SWARTHMORE COLLEGE	239	234	0	0	3	0	2	0
329 WEST TEXAS STATE UNIV	237	12	55	0	47	122	0	1
330 BALL STATE UNIVERSITY	236	183	17	0	1	17	17	1
TOTAL 1ST 330 INSTS.	2,913,688	2,032,356	269,521	14,109	129,914	85,248	314,735	67,805
331 HAMLINE UNIVERSITY	226	166	0	0	18	0	42E	0
332 WESTERN ILLINOIS UNIV	225	88	52	0	16	24	45	0
333 BOWDOIN COLLEGE	222	95	38	0	21	0	64	4
334 U OF MD BALTIMORE COUNTY	217	178	0	0	24	15	0	0
335 UNIV OF WIS OSHKOSH	211	74	4	16	75	20	22	0
336 SOUTHERN OREGON COLLEGE	207	146	36	17	1	0	27	0
337 SAM HOUSTON STATE UNIV	206	17	89	1	60	1	78	0
338 FEDERAL CITY COLLEGE	205	205	0	0	0	0	0	0
339 ILLINOIS STATE UNIVERSITY	205	96	89	0	6	0	0	14
340 NORTHEST LOUISIANA UNIV	202	188	0	0	0	10	4	0
TOTAL 1ST 340 INSTS.	2,915,814	2,033,589	269,789	14,143	130,135	85,318	315,017	67,823
341 MILWAUKEE SCHOOL OF ENGRG	202	24	0	0	0	147	31	0
342 LAMAR UNIVERSITY	201	64	48	0	48	23	18	0
343 UNIV TENN NASHVILLE	200	58	40	0	22	0	32	48

a/ 313C

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[illegible]	315	64	162	0	0	85	0	4
305 a/	313C	231	20	0	0	28	0	34
306 SUNY COLLEGE CORTLAND	308	215	0	0	45	23	25	0
307 VILLANOVA UNIVERSITY	307	249	0	0	0	37	21	0
308 INDIANA STATE UNIVERSITY	307	214	44	0	26	1	22	0
309 MACALESTER COLLEGE	305	147	0	0	3	4	31	120
310 TEXAS TECHNOLOGICAL UNIV	302	227	42	2	0	1	30	0
TOTAL 1ST 310 INSTS.	2,908,381	2,029,170	269,291	13,903	129,379	84,805	314,110	67,643
311 UNIVERSITY OF DETROIT	302	59	0	0	93	149	0	1
312 NEW YORK INST TECH	298	93	0	0	0	0	205	0
313 DRAKE UNIVERSITY	294	181	0	0	36	28	49	0
314 HUNTER STATE UNIVERSITY	290	283	0	0	0	0	0	7
315 UNIV OF MASS MED SCHOOL	288	271	0	0	17	0	0	0
316 EAST TEXAS STATE UNIV	284	18	100	0	56	0	110	0
317 U OF WIS GREEN BAY	281	157	0	0	9	60	36	19
318 FRANKLIN & MARSHALL COL	277	252	16	0	0	0	0	9
319 REGIS COLLEGE	273	273	0	0	0	0	0	0
320 RIDER COLLEGE	273E	32E	11I	1I	85I	25I	83I	36I
TOTAL 1ST 320 INSTS.	2,911,161	2,030,789	269,418	13,904	129,675	85,067	314,593	67,715
321 VIRGINIA STATE COLLEGE	272	262	0	0	0	0	10	0
322 PORGRA COLLEGE	270	157	0	0	61	0	52	0
323 SAN FRANCISCO ST UNIV	267	182	6	0	0	26	0	53
324 WRIGHT INSTITUTE	262	139	0	0	75	0	14	34
325 AUSTIN COLLEGE	253	169	25	0	46	0	12	1
326 COL VIRGIN ISLAND	246	19	0	205	6	16	0	0
327 ALCORN A & M COLLEGE	245	210	0	0	0	0	35	0
328 SWARTHMORE COLLEGE	239	234	0	0	3	0	2	0
329 WEST TEXAS STATE UNIV	237	12	55	0	47	122	0	1
330 BALL STATE UNIVERSITY	236	183	17	0	1	17	17	1
TOTAL 1ST 330 INSTS.	2,913,688	2,032,356	269,521	14,109	129,914	85,248	314,735	67,805
331 HARLISE UNIVERSITY	226	166	0	0	18	0	42E	0
332 WESTERN ILLINOIS UNIV	225	88	52	0	16	24	45	0
333 BOWDOIN COLLEGE	222	95	38	0	21	0	64	4
334 U OF MD BALTIMORE COUNTY	217	178	0	0	24	15	0	0
335 UNIV OF WIS OSHKOSH	211	74	4	16	75	20	22	0
336 SOUTHERN OREGON COLLEGE	207	126	36	17	1	0	27	0
337 SAM HOUSTON STATE UNIV	206	17	49	1	60	1	78	0
338 FEDERAL CITY COLLEGE	205	205	0	0	0	0	0	0
339 ILLINOIS STATE UNIVERSITY	205	96	89	0	6	0	0	14
340 NORTH LOUISIANA UNIV	202	188	0	0	0	10	4	0
TOTAL 1ST 340 INSTS.	2,915,814	2,033,589	269,789	14,143	130,135	85,318	315,017	67,823
341 MILWAUKEE SCHOOL OF ENGRG	202	34	0	0	0	147	31	0
342 LAMAR UNIVERSITY	201	64	48	0	48	23	18	0
343 UNIV TENN NASHVILLE	200	58	40	4	22	0	33	43
344 TEXAS STATE TECH INST	199	126	73	0	0	0	0	0
345 WELLESLEY COLLEGE	198	167	0	0	13	7	11	0
346 ST VINCENT COLLEGE	198E	0	10I	0I	70I	21I	67I	30I
347 OBERLIN COLLEGE	191	112	0	0	63	0	16	0
348 SMITH COLLEGE	190	141	0	0	0	0	49	0
349 CUNY YORK COLLEGE	188	132	0	0	0	0	50	6
350 EASTERN MICHIGAN UNIV	188	114	36	0	4	0	34	0
TOTAL 1ST 350 INSTS.	2,917,769	2,034,527	269,996	14,147	130,355	85,516	315,326	67,902

a/ CONFIDENTIAL

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-21. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973
CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
351 SOUTHWEST TEXAS ST UNIV	185	140	24	0	21	0	0	0
352 US MILITARY ACADEMY	181	181	0	0	0	0	0	0
353 UNIV OF WIS WHITEWATER	179	158	9	1	2	0	9	0
354 ALBANY STATE COLLEGE	169	169	0	0	0	0	0	0
355 MILWAUKEE AREA TECH COL	169	24	0	0	0	0	145	0
356 PHILA COL PHARMACY & SCI	165	77	0	0	0	58	30	0
357 UNIV OF NORTHERN IOWA	162	72	0	0	0	0	90	0
358 UNIV OF NEVADA LAS VEGAS	161	105	0	24	0	0	31	1
359 LINFIELD COLLEGE	157	128	0	0	0	4	7	18
360 CAL ST POLY U	157	105	0	52	0	0	0	0
TOTAL 1ST 360 INSTS.	2,919,454	2,035,686	270,029	14,224	130,378	85,578	315,638	67,921
361 IDAHO STATE UNIVERSITY	155	109	38	0	8	0	0	0
362 KIRKSVILLE COL OSTEO MED	152	7	0	0	41	0	0	104
363 U OF ARKANSAS PINE BLUFF	151	151	0	0	0	0	0	0
364 OCCIDENTAL COLLEGE	150	71	0	0	38	4	36	1
365 TOWSON STATE COLLEGE	149	141	8	0	0	0	0	0
366 JOHN CARROLL UNIVERSITY	148	128	0	0	16	0	4	0
367 U OF MD EASTERN SHORE	147	147	0	0	0	0	0	0
368 USNH INST OF NAVAL ARCH	143	94	0	0	0	49	0	0
369 CENTRAL STATE UNIVERSITY	141	76	0	0	0	0	65	0
370 FURMAN UNIVERSITY	138	60	0	0	65	0	13	0
TOTAL 1ST 370 INSTS.	2,920,928	2,036,670	270,075	14,224	130,546	85,631	315,756	68,026
371 PANHANDLE STATE COL	137	17	0	0	0	120	0	0
372 U OF WIS PARKSIDE	137	95	0	0	0	1	37	4
373 UNIVERSITY OF PORTLAND	137	112	0	0	0	22	0	3
374 ABILENE CHRISTIAN COLLEGE	137	36	15	0	75	4	7	0
375 NORFOLK STATE COLLEGE	136	118	0	0	18	0	0	0
376 TEXAS SOUTHERN UNIV	135E	40E	29I	4I	14I	9I	33I	6I
377 CLAREMONT GRAD SCHOOL	134	110	0	0	7	0	17	0
378 FISK UNIVERSITY	130E	4E	12I	3I	34I	14I	57I	6I
379 BRADLEY UNIVERSITY	130	15	98	0	11	1	5	0
380 CALIF ST UNIV HAYWARD	129	129	0	0	0	0	0	0
TOTAL 1ST 380 INSTS.	2,922,270	2,037,366	270,229	14,231	130,705	85,802	315,912	68,045
381 MOUNT HOLYOKE COLLEGE	128	65	0	0	9	19	35	0
382 AUGSBURG COLLEGE	126	82	0	0	42	0	0	2
383 DE PAUL UNIVERSITY	124	37	24	0	23	0	40	0
384 PACIFIC UNIVERSITY	123	112	0	0	0	0	11	0
385 UNIV OF WIS EAU CLAIRE	120	108	9	0	3	0	0	0
386 GOUCHER COLLEGE	118	22	57	0	30	0	3E	6E
387 LOWELL TECHNOLOGICAL INST	117	101	0	0	11	5	0	0
388 RENSSELAER POLY INST CONN	114E	38E	7I	1I	21I	9I	34I	4I
389 SUNY COLLEGE POTSDAM	112E	99E	3I	1I	2I	1I	5I	1I
390 BAYLOR COL OF DENTISTRY	112	70	0	0	18	13	10	1
TOTAL 1ST 390 INSTS.	2,923,464	2,038,080	270,329	14,233	130,864	85,849	316,050	68,059

352	US MILITARY ACADEMY	181	181	0	0	0	0	0	0
353	UNIV OF WIS WHITEWATER	179	158	9	1	2	0	9	0
354	ALBANY STATE COLLEGE	169	169	0	0	0	0	0	0
355	MILWAUKEE AREA TECH COL	169	24	0	0	0	0	145	0
356	PHILA COL PHARMACY & SCI	165	77	0	0	0	58	30	0
357	UNIV OF SOUTHERN IOWA	162	72	0	0	0	0	90	0
358	UNIV OF NEVADA LAS VEGAS	161	105	0	24	0	0	31	1
359	LINFIELD COLLEGE	157	126	0	0	0	4	7	18
360	CAL ST POLY U	157	105	0	52	0	0	0	0
	TOTAL 1ST 360 INSTS.	2,919,454	2,035,686	270,029	14,224	130,378	85,578	315,638	67,921
361	IDAHO STATE UNIVERSITY	155	109	38	0	4	0	0	0
362	KIRKSVILLE COL OSTEO MED	152	7	0	0	41	0	0	104
363	U OF ARKANSAS PINE BLUFF	151	151	0	0	0	0	0	0
364	OCCIDENTAL COLLEGE	150	71	0	0	38	4	36	1
365	TOWSON STATE COLLEGE	149	141	8	0	0	0	0	0
366	JOHN CARROLL UNIVERSITY	148	128	0	0	16	0	4	0
367	U OF SD EASTERN SHORE	147	147	0	0	0	0	0	0
368	WEBB INST OF NAVAL ARCH	143	94	0	0	0	49	0	0
369	CENTRAL STATE UNIVERSITY	141	76	0	0	0	0	65	0
370	FURMAN UNIVERSITY	138	60	0	0	65	0	13	0
	TOTAL 1ST 370 INSTS.	2,920,928	2,036,670	270,075	14,224	130,546	85,631	315,756	68,026
371	PANHANDLE STATE COL	137	17	0	0	0	120	0	0
372	U OF WIS PARKSIDE	137	95	0	0	0	1	37	4
373	UNIVERSITY OF PORTLAND	137	112	0	0	0	22	0	3
374	ABILENE CHRISTIAN COLLEGE	137	36	15	0	75	4	7	0
375	NORFOLK STATE COLLEGE	136	118	0	0	18	0	0	0
376	TEXAS SOUTHERN UNIV	135E	40E	29I	4I	14I	9I	33I	5I
377	CLAREMONT GRAD SCHOOL	134	110	0	0	7	0	17	0
378	FISK UNIVERSITY	130E	4E	12I	3I	34I	14I	57I	6I
379	RADLEY UNIVERSITY	1[illegible]	15	98	0	11	1	5	0
380	CALIF ST UNIV HAYWARD	129	129	0	0	0	0	0	0
	TOTAL 1ST 380 INSTS.	2,922,270	2,037,346	270,229	14,231	130,705	85,802	315,912	68,045
381	MOUNT HOLYOKE COLLEGE	128	65	0	0	9	19	35	0
382	AUGSBURG COLLEGE	126	82	0	0	42	0	0	2
383	ST PAUL UNIVERSITY	124	37	24	0	23	0	40	0
384	PACIFIC UNIVERSITY	123	112	0	0	0	0	11	0
385	UNIV OF WIS EAU CLAIRE	120	108	9	0	3	0	0	0
386	GOUCHER COLLEGE	118	22	57	0	30	0	3E	6E
387	LOWELL TECHNOLOGICAL INST	117	101	0	0	11	5	0	0
388	RENSSELAR POLY INST CONN	114E	38E	7I	1I	21I	9I	34I	4I
389	SUNY COLLEGE POTSDAM	112E	99E	3I	1I	2I	1I	5I	1I
390	BAYLOR COL OF DENTISTRY	112	70	0	0	18	13	10	1
	TOTAL 1ST 390 INSTS.	2,923,464	2,038,080	270,329	14,233	130,864	85,849	316,050	68,059
391	NORTHEAST ST UNIV LA	111	102	0	0	3	6	0	0
392	ROLLINS COLLEGE	111	75	8	6	0	0	22	0
393	COLUMBIA UNIV BARNARD COL	110	63	0	0	24	23	0	0
394	AUGUSTANA COLLEGE	110	108	0	0	2	0	0	0
395	UNIV OF WIS PLATTEVILLE	106	92	9	0	0	3	0	2
396	ITHACA COLLEGE	105E	40E	2I	0I	16I	5I	15I	7I
397	PHILA COL OSTEOPATHIC MED	104E	37E	4I	0I	23I	7I	23I	10I
398	BEMIDJI STATE COLLEGE	103	100	3	0	0	0	0	0
399	ARKANSAS STATE UNIV	102	40	0	0	0	11	35	16
400	CONNECTICUT COLLEGE	102	74	0	0	13	0	15	0
	TOTAL 1ST 400 INSTS.	2,924,528	2,038,831	270,355	14,239	130,945	85,904	316,160	68,094
	ALL OTHER INSTITUTIONS	9,024	5,527	495	147	812	481	1,236	326

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-22. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE: FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTITUTIONS' OWN FUNDS	OTHER
UNITED STATES, TOTAL	1,796,429	1,145,420	244,160	8,069	60,540	52,130	249,098	36,212
1 UNIV OF WISCONSIN-MADISON	84,201	45,783	16,172	0	2,384	1,038	16,501	2,323
2 UNIVERSITY OF MICHIGAN	69,229	45,021	2,198	23	3,359	4,082	12,959	1,587
3 U OF CAL SAN DIEGO	66,789	60,945	103	0	2,210E	0	3,531	0
4 U OF CAL BERKELEY	56,692	42,716	1,473	0	2,318E	0	10,185	0
5 UNIVERSITY OF MINNESOTA	53,467	30,800	4,959	0	3,081	1,259	11,146	2,202
6 UNIVERSITY OF WASHINGTON	53,424	47,305	1,978	320	1,129	755	433	1,504
7 U OF CAL LOS ANGELES	52,291	44,011	455	0	3,301E	114E	4,410	0
8 UNIV ILLINOIS URBANA	40,223	27,404	1,290	473	735	580	9,304	437
9 UNIVERSITY OF COLORADO	34,365	26,774	1,158	360	1,851	3,430	300	492
10 TEXAS A & M UNIVERSITY	33,610	15,021	14,176	0	777	3,460	0	176
TOTAL 1ST 10 INSTS.	544,279	385,780	43,962	1,176	21,145	14,726	68,769	8,721
11 U OF CAL DAVIS	33,247	17,712	1,077	0	659E	1,144E	12,655	0
12 MICHIGAN STATE UNIVERSITY	32,534	20,554	6,836	332	2,440	1,673	0	699
13 UNIV OF TEXAS AT AUSTIN	31,386	17,39.	6,780	88	1,383	371	3,950	1,423
14 OHIO STATE UNIVERSITY	30,778	19,693	6,374	0	1,287	1,828	1,016	580
15 PENNSYLVANIA STATE UNIV	30,206E	17,201E	2,648	52	502E	1,322E	7,820	741E
16 U OF CAL SAN FRANCISCO	29,109	24,042	248	0	2,191E	394E	2,234	0
17 UNIVERSITY OF ARIZONA	27,764	14,409	7,287	86	733	744	3,438	1,067
18 PURDUE UNIV ALL CAMPUSES	27,315	16,692	4,398	0	193	1,206	4,812	14
19 UNIVERSITY OF FLORIDA	27,254	10,699	777	90	660	666	13,777	585E
20 UNIVERSITY OF HAWAII	26,859	16,136	9,907	130	363	65	55	203
TOTAL 1ST 20 INSTS.	840,811	560,309	90,294	1,954	31,556	24,139	118,526	14,033
21 UNIVERSITY OF GEORGIA	26,318	8,353	15,170	0	58	769	1,960	0
22 N C STATE UNIV AT RALEIGH	24,856	11,326	11,155	100	488	618	500	669
23 UNIV OF NC AT CHAPEL HILL	24,644	19,930	1,615	0	1,414	780	905	0
24 UNIVERSITY OF UTAH	23,469	18,460	648	1,103	823	348	2,087	0
25 UNIV OF MISSOURI COLUMBIA	22,495	7,803	5,647	0	170	432	8,121	322
26 RUTGERS THE STATE UNIV	21,939	10,208	5,337	71	291	0	5,278	754
27 COLORADO STATE UNIVERSITY	20,451	15,415	3,442	71	209	961	352	1
28 UNIV OF MD COLLEGE PARK	20,365	12,635	5,858	3	58	1,297	470	44
29 OREGON STATE UNIVERSITY	20,241	11,680	5,529	58	385	875	1,700	14
30 UNIVERSITY OF KANSAS	17,925	14,141	406	135	461	354	2,218	210
TOTAL 1ST 30 INSTS.	1,063,506	690,260	145,101	3,495	35,913	30,573	142,117	16,047
31 LA ST U BATON ROUGE	16,568	4,833	366	0	44	569	10,738	0
32 UNIVERSITY OF ALASKA	16,560	11,822	229	0	207	486	3,000	818
33 IOWA ST U OF SCI & TECH	16,525	6,178	4,514	367	103	715	4,816	32
34 UNIVERSITY OF CONNECTICUT	16,381	7,618	182	67	532	94	7,481	477
35 WASHINGTON STATE UNIV	15,402	4,559	8,028	14	37	462	2,092	70
36 UNIVERSITY OF IOWA	15,386	13,053	80	0	206	204	487	556
37 UNIVERSITY OF PITTSBURGH	15,048	13,074	106	0	732	123	798	215
38 UNIV OF NEBRASKA - LNCLN	13,970	3,990	6,303	36	174	397	3,042	28
39 U OF CAL RIVERSIDE	13,960	5,606	959	0	330E	0	7,065	0
40 OKLAHOMA STATE UNIVERSITY	13,616	6,127	4,695	0	74	126	1,504	895
TOTAL 1ST 40 INSTS.	1,216,722	767,315	170,563	3,739	38,376	33,087	183,136	19,108
41 VIRGINIA POLYTECHNIC INST	13,380	5,109	6,488	0	207	660	73	763
42 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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3 U OF CAL SAN DIEGO	66,789	60,945	103	0	2,210E	0	3,531	0
4 U OF CAL BERKELEY	56,692	42,716	1,473	0	2,318E	0	10,185	0
5 UNIVERSITY OF MINNESOTA	53,447	30,800	4,959	0	3,081	1,259	11,146	2,202
6 UNIVERSITY OF WASHINGTON	53,424	47,305	1,979	320	1,129	755	433	1,504
7 U OF CAL LOS ANGELES	52,291	44,011	455	0	3,301E	114E	4,410	0
8 UNIV ILLINOIS URBANA	40,223	27,404	1,290	473	735	580	9,304	437
9 UNIVERSITY OF COLORADO	34,365	26,774	1,158	360	1,851	3,430	300	492
10 TEXAS A & M UNIVERSITY	33,618	15,021	14,176	0	777	3,468	0	176
TOTAL 1ST 10 INSTS.	544,279	385,780	43,962	1,176	21,145	14,726	68,769	8,721
11 U OF CAL DAVIS	33,247	17,712	1,077	0	659E	1,144E	12,655	0
12 MICHIGAN STATE UNIVERSITY	32,534	20,554	6,836	332	2,440	1,673	0	699
13 UNIV OF TEXAS AT AUSTIN	31,386	17,391	6,780	88	1,383	371	3,950	1,423
14 OHIO STATE UNIVERSITY	30,778	19,693	6,374	0	1,287	1,828	1,016	580
15 PENNSYLVANIA STATE UNIV	30,286E	17,201E	2,648	52	502E	1,322E	7,820	741E
16 U OF CAL SAN FRANCISCO	29,109	24,042	248	0	2,191E	394E	2,234	0
17 UNIVERSITY OF ARIZONA	27,764	14,409	7,287	86	733	744	3,438	1,067
18 PURDUE UNIV ALL CAMPUSES	27,315	16,692	4,398	0	193	1,206	4,812	14
19 UNIVERSITY OF FLORIDA	27,254	10,699	777	90	660	666	13,777	585E
20 UNIVERSITY OF HAWAII	26,859	16,136	9,907	130	363	65	55	203
TOTAL 1ST 20 INSTS.	840,811	560,309	90,294	1,954	31,556	24,139	118,526	14,033
21 UNIVERSITY OF GEORGIA	26,310	8,353	15,170	0	58	769	1,960	0
22 N C STATE UNIV AT RALEIGH	24,856	11,326	11,155	100	488	618	500	669
23 UNIV OF NC AT CHAPEL HILL	24,644	19,930	1,615	0	1,414	780	905	0
24 UNIVERSITY OF UTAH	23,469	18,460	648	1,103	823	348	2,087	0
25 UNIV OF MISSOURI COLUMBIA	22,495	7,803	5,647	0	170	432	8,121	322
26 RUTGERS THE STATE UNIV	21,939	10,208	5,337	71	291	0	5,278	754
27 COLORADO STATE UNIVERSITY	20,451	15,415	3,442	71	209	961	352	1
28 UNIV OF MD COLLEGE PARK	20,365	12,635	5,858	3	58	1,297	470	44
29 OREGON STATE UNIVERSITY	20,241	11,680	5,529	58	385	875	1,700	14
30 UNIVERSITY OF KANSAS	17,925	14,141	406	135	461	354	2,218	210
TOTAL 1ST 30 INSTS.	1,063,506	690,260	145,101	3,495	35,913	30,573	142,117	16,047
31 LA ST U BATON ROUGE	16,568	4,833	366	0	66	569	10,734	0
32 UNIVERSITY OF ALASKA	16,560	11,822	229	0	207	484	3,000	818
33 IOWA ST U OF SCI & TECH	16,525	6,178	4,514	147	103	715	4,816	52
34 UNIVERSITY OF CONNECTICUT	16,381	7,618	182	47	532	94	7,481	427
35 WASHINGTON STATE UNIV	15,402	4,559	8,028	14	37	602	2,092	70
36 UNIVERSITY OF IOWA	15,386	13,853	80	0	206	204	487	556
37 UNIVERSITY OF PITTSBURGH	15,048	13,074	106	0	732	123	798	215
38 UNIV OF NEBRASKA - LNCLN	13,970	3,990	6,303	36	174	397	3,042	28
39 U OF CAL RIVERSIDE	13,960	5,606	959	0	330E	0	7,065	0
40 OKLAHOMA STATE UNIVERSITY	13,416	6,122	4,695	0	74	126	1,504	895
TOTAL 1ST 40 INSTS.	1,216,722	767,915	170,563	3,739	38,374	33,887	183,136	19,108
41 VIRGINIA POLYTECHNIC INST	13,380	5,189	6,488	0	207	660	73	763
42 U OF TEX M D ANDERSON HOS	13,264	7,962	0	0	580	0	4,431	291
43 UNIV OF KENTUCKY ALL CAM	12,594	6,248	1,403	0	215	240	4,460	28
44 KANSAS ST UNIVERSITY	12,457	5,517	4,779	0	79	356	1,726	0
45 GEORGIA INSTITUTE OF TECH	12,263	6,111	402	192	25	988	4,024	521
46 UNIVERSITY OF CINCINNATI	12,142	6,903	100	378	704	520	894	2,643
47 CUNY MT SINAI SCH OF MED	11,785	8,055	0	157	1,282	258	1,249	784
48 UNIV ALABAMA BIRMINGHAM	11,588	10,729	44	16	294	385	0	120
49 FLORIDA STATE UNIVERSITY	11,324	8,695	565	14	604	0	1,446	0
50 MISSISSIPPI STATE UNIV	11,113	4,216	3,938	378	28	245	2,280	28
TOTAL 1ST 50 INSTS.	1,338,632	837,540	188,282	4,874	42,392	37,539	203,719	24,286

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-22. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
51 UNIVERSITY OF VIRGINIA	11,027	8,425	71	0	455	238	1,720	118
52 SUNY BUFFALO	10,380	8,139	113	190	398	80	1,342	118
53 UTAH STATE UNIVERSITY	9,837	7,594	1,503	5	0	501	0	234
54 INDIANA UNIVERSITY-PURDUE	9,765	6,514	124	408	568	460	1,691	0
55 SUNY UPSTATE MEDICAL CTR	9,486	6,720	0	7	133	97	0	2,529
56 AUBURN UNIVERSITY	9,464	4,078	3,358	0	5	271	1,717	35
57 INDIANA UNIV-BLOOMINGTON	9,214	7,744	233	168	115	70	662	222
58 UNIV OF MASS AT AMHERST	9,180	6,719	1,239	8	206	296	712	0
59 UNIV OF RHODE ISLAND	8,855	7,466	522	100	160	50	520	37
60 UNIVERSITY OF IDAHO	8,572	3,759	3,626	11	20	432	724	0
TOTAL 1ST 60 INSTS.	1,434,412	904,698	199,071	5,771	44,452	40,034	212,807	27,579
61 SUNY STONY BROOK	8,540	6,837	227E	1	757E	492E	94E	132E
62 UNIVERSITY OF ARKANSAS	7,638	2,811	4,372	0	45	303	0	107
63 UNIV OF VT & ST AGRIC COL	7,188	4,761	742	0	225	136	1,160	164
64 UNIVERSITY OF NEW MEXICO	7,093	5,093	405	0	25	53	1,064	453
65 U TENN MED UNITS MEMPHIS	7,081	6,001	215	0	154	439	0	272
66 WEST VIRGINIA UNIVERSITY	6,851	4,736	1,633	0	48	128	67	239
67 VIRGINIA COMMONWLTH UNIV	6,850	5,282	181	36	587	299	454	11
68 NEW MEXICO STATE UNIV	6,849	6,257	239	13	3	337	0	0
69 UNIV OF MD BALTIMORE	6,812	5,695	2	0	862	224	8	21
70 U OF CAL IRVINE	6,776	5,949	0	0	365E	93E	369	0
TOTAL 1ST 70 INSTS.	1,506,090	958,120	207,087	5,821	47,523	42,538	216,023	28,978
71 CLEMSON UNIVERSITY	6,744	2,260	3,939	7	237	179	58	64
72 UNIVERSITY OF OREGON	6,697	6,361	0	0	42	0	63	231
73 MONTANA STATE UNIVERSITY	6,692	2,450	2,300	0	4	321	1,584	33
74 UNIVERSITY OF WYOMING	6,678	4,531	1,298	671	41	137	0	0
75 U OF ILL MEDICAL CENTER	6,554	4,330	1,194	87	376	97	199	271
76 U TEX GALVESTON MED BRAN	6,534	4,224	1,142	0	914	97	0	157
77 UNIV OF MAINE ORONO	6,438	4,307	310	10	89	253	1,469	0
78 WAYNE STATE UNIVERSITY	6,386	3,741	70	22	432	305	1,609	207
79 UNIV OF MISSISSIPPI	6,278	3,865	645	2	617	373	690	86
80 U TEX HLTH SCI CTR DALLAS	6,258	4,941	0	0	762	354	20	181
TOTAL 1ST 80 INSTS.	1,571,349	999,130	217,985	6,620	51,037	44,654	221,715	30,208
81 U OF OREGON MED SCHOOL	6,036E	4,571E	21E	0	736E	14E	484E	210E
82 UNIV OKLAHOMA	5,937E	4,797E	524E	0	114E	81	255	166
83 UNIVERSITY OF DELAWARE	5,760	3,500	631	0	498	219	872	40
84 SUNY DOWNSTATE MED CTR	5,568	4,126	14	242	400	101	0	685
85 SUNY ALBANY	5,263	4,125	191	0	30	313	518	86
86 NORTH DAKOTA STATE UNIV	5,263	1,480	2,725	0	17	224	0	817
87 INDIANA UNIV NORTHWEST	5,082	5,077	0	0	0	0	5	0
88 U OF CAL SANTA BARBARA	4,939	4,146	114	0	115E	0	564	0
89 UNIV OF MO SYSTEM OFC	4,706	2,368	578	0	98	0	1,662	0
90 SOUTH DAKOTA STATE UNIV	4,472	1,596	2,347	0	3	110	416	0
TOTAL 1ST 90 INSTS.	1,624,375	1,034,916	225,130	6,862	53,048	45,716	226,491	32,212
91 U TENNESSEE KNOXVILLE	4,067	3,555	143	35	68	111	127	28
92 UNIV OF MISSOURI ROLLA	4,059	2,200	4	0	0	121	1,718	16

54	INDIANA UNIVERSITY-PURDUE	9,765	6,514	124	408	568	460	1,691	0
55	SUNY UPSTATE MEDICAL CTR	9,486	6,720	0	7	133	97	0	2,529
56	AUBURN UNIVERSITY	9,464	4,078	3,358	0	5	271	1,717	35
57	INDIANA UNIV-BLOOMINGTON	9,214	7,744	233	168	115	70	662	222
58	UNIV OF MASS AT AMHERST	9,180	6,719	1,239	8	206	296	712	0
59	UNIV OF RHODE ISLAND	8,855	7,466	522	100	160	50	520	37
60	UNIVERSITY OF IDAHO	8,572	3,759	3,626	11	20	432	724	0
	TOTAL 1ST 60 INSTS.	1,434,412	904,698	199,071	5,771	44,452	40,034	212,807	27,579
61	SUNY STONY BROOK	8,540	6,837	227E	1	757E	492E	94E	132E
62	UNIVERSITY OF ARKANSAS	7,638	2,811	4,372	0	45	303	0	107
63	UNIV OF VT & ST AGRIC COL	7,188	4,761	742	0	225	136	1,160	164
64	UNIVERSITY OF NEW MEXICO	7,093	5,093	405	0	25	53	1,064	453
65	U TENN MED UNITS MEMPHIS	7,081	6,001	215	0	154	439	0	272
66	WEST VIRGINIA UNIVERSITY	6,851	4,736	1,633	0	48	128	67	239
67	VIRGINIA COMMONWLTH UNIV	6,850	5,282	181	36	587	299	454	11
68	NEW MEXICO STATE UNIV	6,849	6,257	239	13	3	337	0	0
69	UNIV OF MD BALTIMORE	6,812	5,695	2	0	862	224	8	21
70	U OF CAL IRVINE	6,776	5,949	0	0	365E	93E	369	0
	TOTAL 1ST 70 INSTS.	1,506,090	958,120	207,087	5,821	47,523	42,538	216,023	28,978
71	CLEMSON UNIVERSITY	6,744	2,260	3,939	7	237	179	58	64
72	UNIVERSITY OF OREGON	6,697	6,361	0	0	42	0	63	231
73	MONTANA STATE UNIVERSITY	6,692	2,450	2,300	0	4	321	1,584	33
74	UNIVERSITY OF WYOMING	6,678	4,531	1,298	671	41	137	0	0
75	U OF ILL MEDICAL CENTER	6,554	4,330	1,194	87	376	97	199	271
76	U TEX GALVESTON MED BRAN	6,534	4,224	1,142	0	914	97	0	157
77	UNIV OF MAINE ORONO	6,438	4,307	310	10	89	253	1,469	0
78	MAINE STATE UNIVERSITY	6,386	3,741	70	22	432	305	1,609	207
79	UNIV OF MISSISSIPPI	6,278	3,865	645	2	617	373	690	86
80	U TEX HLTH SCI CTR DALLAS	6,258	4,941	0	0	762	354	20	181
	TOTAL 1ST 80 INSTS.	1,571,349	999,130	217,985	6,620	51,037	44,654	221,715	30,208
81	U OF OREGON MED SCHOOL	6,036E	4,571E	21E	0	736E	14E	484E	210E
82	UNIV OKLAHOMA	5,937E	4,797E	524E	0	114E	81	255	166
83	UNIVERSITY OF DELAWARE	5,760	3,500	631	0	498	219	872	40
84	SUNY DOWNSTATE MED CTR	5,568	4,126	14	242	400	101	0	685
85	SUNY ALBANY	5,263	4,125	191	0	30	313	518	86
86	NORTH DAKOTA STATE UNIV	5,263	1,480	2,725	0	17	224	0	817
87	INDIANA UNIV NORTHWEST	5,082	5,077	0	0	0	0	5	0
88	U OF CAL SANTA BARBARA	4,939	4,146	114	0	115E	0	564	0
89	UNIV OF MO SYSTEM OFC	4,706	2,368	578	0	98	0	1,662	0
90	SOUTH DAKOTA STATE UNIV	4,472	1,596	2,347	0	3	110	416	0
	TOTAL 1ST 90 INSTS.	1,624,375	1,034,916	225,130	6,862	53,048	45,716	226,491	32,212
91	U TENNESSEE KNOXVILLE	4,067	3,555	143	35	68	111	127	28
92	UNIV OF MISSOURI ROLLA	4,059	2,200	4	0	0	121	1,718	16
93	TEXAS TECH UNIVERSITY	4,037	938	2,034	0	322	132	4	607
94	UNIV OF NEW HAMPSHIRE	3,856	2,846	429	0	28	5	262	286
95	U TEX HLTH SCI CR HOUSTON	3,812	2,884	382	3	218	36	235	54
96	U OF NEB MED C AT OMAHA	3,706E	2,984E	2E	0	166E	34E	490E	30E
97	U OF WIS MILWAUKEE	3,665	1,149	1,215	0	158	71	964	108
98	S U N Y SYSTEM OFFICE	3,572	2,812	287I	10I	69I	61I	290I	43I
99	COL OF MED & DENT OF N J	3,457	2,902	56	1	371	127	0	0
100	U PUERTO RICO SAN JUAN	3,300E	3,080E	11E	0	22E	55E	28E	104E
	TOTAL 1ST 100 INSTS.	1,661,906	1,060,266	229,693	6,911	54,470	46,469	230,609	33,488

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-22. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
101 U TEX HLTH SCI CR SAN ANT	3,285	2,599	52	24	374	142	0	94
102 U OF NEV DESERT RES INST	3,239	2,216	226	18	115	375	245	44
103 LA ST U MED CTR N ORLEANS	3,231	2,060	225	0	547	187	212	0
104 UNIV OF NEVADA - RENO	3,049	1,239	1,066	0	25	64	646	9
105 UNIVERSITY OF HOUSTON	3,044	2,436	183	6	246	1	40	132
106 US NAVAL POSTGRAD SCHOOL	2,925	2,925	0	0	0	0	0	0
107 SAN DIEGO ST UNIVERSITY	2,842	2,272	229E	149E	90	98	0	4
108 SUNY COL OF ENV SCI & FOR	2,808	899	106	0	114	168	1,388	133
109 U OF CAL SANTA CRUZ	2,769	1,715	0	0	138E	0	916	0
110 SOUTHERN ILLINOIS UNIV	2,754	580	1,648	0	0	56	211	259
TOTAL 1ST 110 INSTS.	1,691,852	1,079,207	233,428	7,108	56,119	47,560	234,267	34,163
111 UNIVERSITY OF LOUISVILLE	2,751	1,887	71	80	404	90	219	0
112 MEDICAL COLL OF GEORGIA	2,724	1,917	83	210	271	118	125	0
113 NC AG & TECH STATE UNIV	2,695	2,145	136	0	262	123	0	29
114 U PUERTO RICO MAYAGUEZ	2,670	2,416	86	0	20	38	110	0
115 N MEX INST MINING & TECH	2,534	1,460E	774	0	0	243E	57	0
116 MED UNIV OF SO CAROLINA	2,305	1,739	204	0	142	191	0	29
117 U OF ARKANSAS MED CENTER	2,249	1,766	0	0	67	32	384	0
118 U OF MO K C	2,247	1,592	7	15	0	121	429	83
119 ARIZONA STATE UNIVERSITY	2,242	1,345	95	9	121	95	577	0
120 MICHIGAN TECH UNIVERSITY	2,207	460	73	0	12	260	1,376	26
TOTAL 1ST 120 INSTS.	1,716,476	1,095,934	234,957	7,422	57,418	48,871	237,544	34,330
121 U OF CAL UNIV-WIDE PRGMS	1,991	50	10	0	0	0	1,931	0
122 SUNY COLLEGE BROCKPORT	1,985	1,465	56E	0	42E	6E	416	0
123 UNIV OF SOUTH FLORIDA	1,956	1,087	115	1	11	324	311	107
124 UNIV OF SOUTH CAROLINA	1,841	792	685	2	210	24	111	17
125 CUNY CITY COLLEGE	1,833E	1,384E	169I	6I	42I	36I	171I	25I
126 OLD DOMINION UNIVERSITY	1,829	1,234	5	24	16	11	527	12
127 UNIV OF ILL CHICAGO CIR	1,775	1,380	94	0	46	2	221	32
128 MED COLL OHIO AT TOLEDO	1,740	1,521	0	0	75	0	0	144
129 UNIVERSITY OF MONTANA	1,647E	792E	418E	0	0	437E	0	0
130 NEW MEXICO HIGHLANDS UNIV	1,592	1,239	86	0	154	0	72	41
TOTAL 1ST 130 INSTS.	1,734,665	1,106,878	236,595	7,455	58,014	49,711	241,304	34,708
131 CUNY GRADUATE DIVISION	1,567	991	0	264	189	41	78	4
132 OHIO UNIVERSITY	1,497	897	26	1	22	141	410	0
133 UNIV ALABAMA HUNTSVILLE	1,487	1,310	50	20	18	35	38	16
134 UNIV OF NORTH DAKOTA	1,400	1,023	132E	0	68E	48E	91	38E
135 COLORADO SCHOOL OF MINES	1,380	1,366	14	0	0	0	0	0
136 S DAK SCH MINES & TECH	1,317	881	75	38	1	79	51	192
137 UNIV ALABAMA UNIVERSITY	1,245	875	205	0	0	24	118	23
138 US AIR FORCE ACADEMY	1,134	1,134	0	0	0	0	0	0
139 KENT STATE UNIVERSITY	1,080	698	37	0	17	8	314	6
140 CUNY QUEENS COLLEGE	1,047E	590E	140I	16I	68I	47I	161I	25I
TOTAL 1ST 140 INSTS.	1,747,819	1,116,643	237,274	7,794	58,397	50,134	242,565	35,012
141 CALIF ST UNIV FULLERTON	1,041	982	40	0	19	0	0	0

103 LA ST U MED CTR N ORLEANS	3,231	2,060	225	0	547	187	212	0
104 UNIV OF NEVADA - RENO	3,049	1,239	1,066	0	25	64	646	9
105 UNIVERSITY OF HOUSTON	3,044	2,436	183	6	246	1	40	132
106 US NAVAL POSTGRAD SCHOOL	2,925	2,925	0	0	0	0	0	0
107 SAN DIEGO ST UNIVERSITY	2,842	2,272	229E	149E	90	98	0	4
108 SUNY COL OF ENV SCI & FOR	2,808	899	106	0	114	168	1,388	133
109 U OF CAL SANTA CRUZ	2,769	1,715	0	0	138E	0	916	0
110 SOUTHERN ILLINOIS UNIV	2,754	580	1,648	0	0	56	211	259
TOTAL 1ST 110 INSTS.	1,691,852	1,079,207	233,428	7,108	56,119	47,560	234,267	34,163
111 UNIVERSITY OF LOUISVILLE	2,751	1,887	71	80	404	90	219	0
112 MEDICAL COLL OF GEORGIA	2,724	1,917	83	210	271	118	125	0
113 NC AG & TECH STATE UNIV	2,695	2,145	136	0	262	123	0	29
114 U PUERTO RICO MAYAGUEZ	2,670	2,416	86	0	20	38	110	0
115 N MEX INST MINING & TECH	2,534	1,460E	774	0	0	243E	57	0
116 MED UNIV OF SO CAROLINA	2,305	1,739	204	0	142	191	0	29
117 U OF ARKANSAS MED CENTER	2,249	1,766	0	0	67	32	384	0
118 U OF MO K C	2,247	1,592	7	15	0	121	429	83
119 ARIZONA STATE UNIVERSITY	2,242	1,345	95	9	121	95	577	0
120 MICHIGAN TECH UNIVERSITY	2,207	460	73	0	12	260	1,376	26
TOTAL 1ST 120 INSTS.	1,716,476	1,095,934	234,957	7,422	57,418	48,871	237,544	34,330
121 U OF CAL UNIV-WIDE PRGMS	1,991	50	10	0	0	0	1,931	0
122 SUNY COLLEGE BROCKPORT	1,985	1,465	56E	0	42E	6E	416	0
123 UNIV OF SOUTH FLORIDA	1,956	1,087	115	1	11	324	311	107
124 UNIV OF SOUTH CAROLINA	1,841	792	685	2	210	24	111	17
125 CUNY CITY COLLEGE	1,833E	1,384E	169I	6I	42I	36I	171I	25I
126 OLD DOMINION UNIVERSITY	1,829	1,234	5	24	16	11	527	12
127 UNIV OF ILL CHICAGO CIR	1,775	1,380	94	0	46	2	221	32
128 MED COLL OHIO AT TOLEDO	1,740	1,521	0	0	75	0	0	144
129 UNIVERSITY OF MONTANA	1,647E	792E	418E	0	0	437E	0	0
130 NEW MEXICO HIGHLANDS UNIV	1,592	1,239	86	0	154	0	72	41
TOTAL 1ST 130 INSTS.	1,734,665	1,106,878	236,595	7,455	58,014	49,711	241,304	34,708
131 CUNY GRADUATE DIVISION	1,567	991	0	264	189	41	78	4
132 OHIO UNIVERSITY	1,497	897	26	1	22	141	410	0
133 UNIV ALABAMA HUNTSVILLE	1,487	1,310	50	20	18	35	38	16
134 UNIV OF NORTH DAKOTA	1,400	1,023	132E	0	68E	48E	91	38E
135 COLORADO SCHOOL OF MINES	1,380	1,366	14	0	0	0	0	0
136 S DAK SCH MINES & TECH	1,317	881	75	38	1	79	51	192
137 UNIV ALABAMA UNIVERSITY	1,245	875	205	0	0	24	118	23
138 US AIR FORCE ACADEMY	1,134	1,134	0	0	0	0	0	0
139 KENT STATE UNIVERSITY	1,080	698	37	0	17	8	314	6
140 CUNY QUEENS COLLEGE	1,047E	590E	140I	16I	68I	47I	161I	25I
TOTAL 1ST 140 INSTS.	1,747,819	1,116,643	237,274	7,794	58,397	50,134	242,565	35,012
141 CALIF ST UNIV FULLERTON	1,041	982	40	0	19	0	0	0
142 UNIV OF SOUTH ALABAMA	985	774	163	0	29	0	18	1
143 U PUERTO RICO RIO PIEDRAS	980E	178E	303I	11I	73I	63I	307I	45I
144 UNIV OF STHRN MISSISSIPPI	937	402	19	0	11	101	404	0
145 UNIV OF TEX AT ARLINGTON	932	167	578	6	99	13	41	28
146 KENTUCKY STATE UNIV	931E	596	56I	62I	29I	61I	118I	9I
147 UNIV OF SOUTH DAKOTA	922	425	130	0	59	11	131	166
148 UNIV OF MO ST LOUIS	889	383	0	0	19	3	458	16
149 BOWLING GREEN STATE UNIV	848	442	0	0	87	28	291	0
150 UNIV OF MASS BOSTON	832E	832E	0	0	0	0	0	0
TOTAL 1ST 150 INSTS.	1,757,116	1,121,824	238,563	7,873	58,822	50,414	244,343	35,277
ALL OTHER INSTITUTIONS	39,313	23,596	5,597	996	1,718	1,716	4,755	935

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-23. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PRIVATE UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
UNITED STATES, TOTAL	1,137,123	898,938	26,690	5,517	71,217	34,255	68,298	32,208
1 MASS INST OF TECHNOLOGY	125,413	112,652	350	149	3,571	3,874	451	4,366
2 HARVARD UNIVERSITY	58,480	47,765	260	1	5,436	810	1,475	2,733
3 CORNELL UNIVERSITY	57,453	32,273	13,634	211	2,884	2,145	5,141	1,165
4 COLUMBIA UNIV MAIN DIV	57,376	46,362	173	174	6,815	457	3,395	0
5 STANFORD UNIVERSITY	53,984	50,751	12	145	1,797	145	1,087	47
6 UNIVERSITY OF CHICAGO	51,711	37,930	1,385	685	4,186	217	3,391	3,917
7 JOHNS HOPKINS UNIVERSITY	42,268	35,416	1,523	20	1,293	883	1,650	1,483
8 UNIV OF PENNSYLVANIA	40,594	31,388	972	273	3,001	1,007	2,865	1,088
9 UNIVERSITY OF ROCHESTER	38,497	30,135	428	274	1,282	1,316	4,510	552
10 NEW YORK UNIVERSITY	37,219	27,081	437	814	3,697	1,098	2,148	1,944
TOTAL 1ST 10 INSTS.	562,995	451,753	19,174	2,746	33,962	11,952	26,113	17,295
11 YALE UNIVERSITY	34,200	29,697	420	0	2,736	136	772	437
12 UNIVERSITY OF MIAMI	26,769	18,237	18	67	1,321	1,060	4,960	1,106
13 WASHINGTON UNIV ST LOUIS	25,286	22,666	175	0	965	766	0	714
14 UNIV OF STHRN CALIFORNIA	25,155	21,855	60	207	1,750	429	0	854
15 YESHIVA UNIVERSITY	24,916	21,571	0	0	3,345	0	0	0
16 ROCKEFELLER UNIVERSITY	24,103	9,379	995	199	2,634	183	10,710	3
17 DUKE UNIVERSITY	22,261	19,296	63	0	604	517	304	1,477
18 PRINCETON UNIVERSITY	18,696	13,742	0	0	641	616	3,697	0
19 CALIFORNIA INST OF TECH	18,653	16,603	0	9	611	595	683	152
20 CASE WESTERN RESERVE UNIV	17,963	15,154	118	117	1,535	689	97	253
TOTAL 1ST 20 INSTS.	800,997	639,953	21,023	3,345	50,104	16,945	47,336	22,291
21 NORTHWESTERN UNIVERSITY	16,261	12,809	23	15	784	22	528	2,080
22 BAYLOR COLLEGE OF MED	15,134	13,235	0	3	1,058	441	13	384
23 CARNEGIE-MELLON UNIV	14,850	8,783	189	52	317	3,258	2,193	58
24 WOODS HOLE OCNGRPHIC INST	14,342	13,370	0	0	165	286	243	318
25 VANDERBILT UNIVERSITY	13,683	11,780	24	42	614	252	834	137
26 TULANE UNIVERSITY	12,392	7,983	251	1	1,325	776	1,122	934
27 GEORGE WASHINGTON UNIV	12,150	10,810	0	81	484	56	595	124
28 SYRACUSE UNIVERSITY	11,988	10,233	403	147	256	461	450	38
29 TEMPLE UNIVERSITY	11,732	7,190	465	15	1,044	60	2,002	956
30 BOSTON UNIVERSITY	9,237	8,407	34	29	651	80	0	36
TOTAL 1ST 30 INSTS.	932,766	744,553	22,412	3,730	56,802	22,597	55,316	27,356
31 BROWN UNIVERSITY	9,075	8,537	27	56	280	69	0	106
32 EMORY UNIVERSITY	8,232	7,141	0	0	451	347	73	220
33 GEORGETOWN UNIVERSITY	7,771	5,026	0	0	696	171	817	1,061
34 TUFTS UNIVERSITY	7,436	6,393	13	0	535	454	41	0
35 UNIVERSITY OF DENVER	6,611	5,437	234	55	121	640	85	39
36 BRANDEIS UNIVERSITY	6,601	5,814	3	0	235	549	0	0
37 ALBANY MED COL OF UNION U	6,598	3,127	522	75	665	452	1,500	257
38 UNIVERSITY OF DAYTON	6,395	6,067	1	65	26	73	102	61
39 RICE UNIVERSITY	5,927	4,971	0	0	952	0	4	0
40 ST LOUIS UNIV	5,548	4,771	244	4	146	163	80E	140E
TOTAL 1ST 40 INSTS.	1,002,960	801,837	23,456	3,985	60,909	25,515	58,018	29,240
41 RENSSELAER POLY INST	5,382E	4,796E	100E	0	16E	239E	231E	0

	[illegible]	58,480	47,765	260	1	5,435	810	1,475	2,733
3	CORNELL UNIVERSITY	57,453	32,273	13,634	211	2,884	2,145	5,141	1,165
4	COLUMBIA UNIV MAIN DIV	57,376	46,362	173	174	6,815	457	3,395	0
5	STANFORD UNIVERSITY	53,984	50,751	12	145	1,797	145	1,087	47
6	UNIVERSITY OF CHICAGO	51,711	37,930	1,385	685	4,186	217	3,391	3,917
7	JOHNS HOPKINS UNIVERSITY	42,268	35,416	1,523	20	1,293	883	1,650	1,483
8	UNIV OF PENNSYLVANIA	40,594	31,388	972	273	3,001	1,007	2,865	1,088
9	UNIVERSITY OF ROCHESTER	38,497	30,135	428	274	1,282	1,316	4,510	552
10	NEW YORK UNIVERSITY	37,219	27,081	437	814	3,697	1,098	2,148	1,944
	TOTAL 1ST 10 INSTS.	562,995	451,753	19,174	2,746	33,962	11,952	26,113	17,295
11	YALE UNIVERSITY	34,200	29,697	420	0	2,736	138	772	437
12	UNIVERSITY OF MIAMI	26,769	18,237	18	67	1,321	1,060	4,960	1,106
13	WASHINGTON UNIV ST LOUIS	25,286	22,666	175	0	965	766	0	714
14	UNIV OF STHRN CALIFORNIA	25,155	21,855	60	207	1,750	429	0	854
15	YESHIVA UNIVERSITY	24,916	21,571	0	0	3,345	0	0	0
16	ROCKEFELLER UNIVERSITY	24,103	9,379	995	199	2,634	183	10,710	3
17	DUKE UNIVERSITY	22,261	19,296	63	0	604	517	304	1,477
18	PRINCETON UNIVERSITY	18,696	13,742	0	0	641	616	3,697	0
19	CALIFORNIA INST OF TECH	18,653	16,603	0	9	611	595	683	152
20	CASE WESTERN RESERVE UNIV	17,963	15,154	118	117	1,535	689	97	253
	TOTAL 1ST 20 INSTS.	800,997	639,953	21,023	3,345	50,104	16,945	47,336	22,291
21	NORTHWESTERN UNIVERSITY	16,261	12,809	23	15	784	22	523	2,080
22	BAYLOR COLLEGE OF MED	15,134	13,235	0	3	1,058	441	13	384
23	CARNEGIE-MELLON UNIV	14,850	8,783	189	52	317	3,258	2,193	58
24	WOODS HOLE OCNGRPHIC INST	14,342	13,370	0	0	165	246	243	318
25	VANDERBILT UNIVERSITY	13,683	11,780	24	42	614	252	834	137
26	TULANE UNIVERSITY	12,392	7,983	251	1	1,325	776	1,122	934
27	GEORGE WASHINGTON UNIV	12,150	10,810	0	81	484	56	595	124
28	SYRACUSE UNIVERSITY	11,988	10,233	403	147	256	461	450	38
29	TEMPLE UNIVERSITY	11,732	7,190	465	15	1,044	60	2,002	956
30	BOSTON UNIVERSITY	9,237	8,407	34	29	651	80	0	36
	TOTAL 1ST 30 INSTS.	932,766	744,553	22,412	3,730	56,802	22,597	55,316	27,356
31	BROWN UNIVERSITY	9,075	8,537	27	56	280	69	0	106
32	EMORY UNIVERSITY	8,232	7,141	0	0	451	347	73	220
33	GEORGETOWN UNIVERSITY	7,771	5,026	0	0	696	171	817	1,061
34	TUFTS UNIVERSITY	7,436	6,393	13	0	535	454	41	0
35	UNIVERSITY OF DENVER	6,611	5,437	234	55	121	640	85	39
36	BRANDEIS UNIVERSITY	6,601	5,814	3	0	235	549	0	0
37	ALBANY MED COL OF UNION U	6,598	3,127	522	75	665	452	1,500	257
38	UNIVERSITY OF DAYTON	6,395	6,067	1	65	26	73	102	61
39	RICE UNIVERSITY	5,927	4,971	0	0	952	0	4	0
40	ST LOUIS UNIV	5,548	4,771	244	4	146	163	80E	140E
	TOTAL 1ST 40 INSTS.	1,002,960	801,837	23,456	3,985	60,909	25,515	58,018	29,240
41	RENSSELAER POLY INST	5,382E	4,796E	100E	0	16E	239E	231E	0
42	THE MED COLL OF WISCONSIN	5,066	3,372	113E	3	990E	316E	0	272E
43	DARTMOUTH COLLEGE	4,918	4,501	4	0	171	46	196	0
44	THOM JEFFERSON UNIV HOSP	4,847	3,873	0	0	795	179	0	0
45	LEHIGH UNIVERSITY	4,654	3,274	388	8	34	607	343	0
46	NEW YORK MEDICAL COLLEGE	4,615	3,550	10	115	721	171	0	48
47	UNIVERSITY OF NOTRE DAME	4,527	4,096	3E	2E	250E	157E	0	19E
48	RUSH MEDICAL COLLEGE	4,485	2,792	74	0	155	304	926	234
49	BOSTON COLLEGE	4,182E	2,552E	138E	232E	322E	66E	804E	68E
50	WAKE FOREST UNIVERSITY	3,701E	3,180E	7E	0	161E	150E	187E	16E
	TOTAL 1ST 50 INSTS.	1,049,337	837,823	24,293	4,345	64,524	27,750	60,705	29,897

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-23. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PRIVATE UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SOURCE OF FUNDS: FY 1973
CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	SOURCE						
		FEDERAL GOVT.	STATE GOVT.	LOCAL GOVT.	FNDNS. & HEALTH AGENCIES	INDUSTRY	INSTI-TUTIONS' OWN FUNDS	OTHER
51 HOWARD UNIVERSITY	3,680E	2,863E	46E	0	290E	109E	0	372E
52 STEVENS INSTITUTE OF TECH	3,498	2,220	95	0	0	999	184	0
53 GEO PEABODY COL TEACHERS	3,378	3,162	14	0	159E	0	43	0
54 POLYTECHNIC INST OF N Y	3,239	3,012	18	54	155	0	0	0
55 HAHNEMAN MEDICAL COLLEGE	3,111	2,517	0	40	151	78	0	325
56 a/	2,836C	2,381	46	0	68	4	277	60
57 ILLINOIS INST OF TECH	2,834	2,571	51E	0	36E	66E	74	36E
58 BRIGHAM YOUNG UNIVERSITY	2,698E	1,368E	383E	16E	163E	304E	418E	46E
59 CATHOLIC UNIV OF AMERICA	2,488	2,155	0	0	0	0	333	0
60 DREXEL UNIVERSITY	2,358E	1,904E	51I	10I	136I	66I	128I	63I
TOTAL 1ST 60 INSTS.	1,079,457	861,976	24,997	4,465	65,682	29,376	62,162	30,799
61 AMERICAN UNIVERSITY THE	2,143	2,112	10	0	16	5	0	0
62 ADELPHI UNIV	2,134	1,814	195	85	0	0	40	0
63 INSTITUTE PAPER CHEMISTRY	1,970	93	0	0	0	1,288	589	0
64 SOUTHERN METHODIST UNIV	1,910	1,518	0	0	73	21	298	0
65 HENNEPIN MEDICAL COLLEGE	1,903E	1,790E	0	0	68E	45E	0	0
66 ANTIOCH COLLEGE	1,809E	1,575E	23I	6I	63I	27I	106I	9I
67 WORCESTER POLY INSTITUTE	1,686	467	105	0	0	1,091	23	0
68 TUSKEGEE INSTITUTE	1,479E	1,349E	13I	3I	35I	15I	59I	5I
69 LOYOLA UNIVERSITY	1,436	1,175	57	0	109	59	5	31
70 THE MED COLL OF PENNA	1,313	1,081	0	0	78	137	0	17
TOTAL 1ST 70 INSTS.	1,097,240	874,950	25,400	4,559	66,124	32,064	63,282	30,861
71 TEXAS CHRISTIAN UNIV	1,308	866	109	51	92	50	140	0
72 TRINITY UNIVERSITY	1,217	734	43	62	162	0	216	0
73 FORDHAM UNIVERSITY	1,174	636	0	462	32	12	32	0
74 WESLEYAN UNIVERSITY	1,173	777	62	1	165	11	151	6
75 WENTWORTH INSTITUTE	1,142	1,082	0	0	15	0	43	2
76 NOVA UNIVERSITY	1,126	910	0	0	88	0	0	128
77 CLARKSON COL OF TECH	1,095	855	0	0	7E	46E	185E	2E
78 GALLAUDET COLLEGE	1,052	584	0	0	0	0	420	48
79 LOMA LINDA UNIVERSITY	1,044	638	0	0	221	75	0	110
80 UNIVERSITY OF SANTA CLARA	935	773	6	0	6	4	27	119
TOTAL 1ST 80 INSTS.	1,108,506	882,805	25,620	5,135	66,912	32,262	64,496	31,276
81 UNIVERSITY OF THE PACIFIC	924E	381E	99E	0	321E	19E	104E	0
82 SETON HALL UNIVERSITY	895	600	100	0	70	5	120	0
83 MARQUETTE UNIVERSITY	839	480	5	17	49	23	189	76
84 FAIRLEIGH DICKINSON UNIV	804	182	143	298	28	98	19	36
85 U HLTH SCI/CHCGO MED SCH	798	494	61	0	108	19	107	9
86 NEW ENGLAND INSTITUTE	778	142	0	0	298	24	292	22
87 AMHERST COLLEGE	744	695	0	0	49	0	0	0
88 UNIV OF SAN FRANCISCO	688E	431E	25I	6I	70I	29I	117I	10I
89 ROCHESTER INST TECHNOLOGY	675	78	0	0	215	29	353	0
90 NEW SCH FOR SOC RESEARCH	646E	146E	10E	0	480E	3E	7E	0
TOTAL 1ST 90 INSTS.	1,116,297	886,434	26,063	5,456	68,600	32,511	65,808	31,429
91 FAIRFIELD UNIVERSITY	560	329	1	0	34	0	196	0

53 GEO PEABODY COL TEACHERS	3,378	3,162	14	0	159E	0	43	0
54 POLYTECHNIC INST OF N Y	3,239	3,012	18	54	155	0	0	0
55 HAHNEMAN MEDICAL COLLEGE	3,111	2,517	0	40	151	78	0	325
56 a/	2,836C	2,381	46	0	68	4	277	60
57 ILLINOIS INST OF TECH	2,834	2,571	51E	0	36E	66E	74	36E
58 BRIGHAM YOUNG UNIVERSITY	2,698E	1,368E	383E	16E	163E	304E	418E	46E
59 CATHOLIC UNIV OF AMERICA	2,488	2,155	0	0	0	0	333	0
60 DREXEL UNIVERSITY	2,358E	1,904E	51I	10I	136I	66I	128I	63I
TOTAL 1ST 60 INSTS.	1,079,457	861,976	24,997	4,465	65,682	29,376	62,162	30,799
61 AMERICAN UNIVERSITY THE	2,143	2,112	10	0	16	5	0	0
62 ADELPHI UNIV	2,134	1,814	195	85	0	0	40	0
63 INSTITUTE PAPER CHEMISTRY	1,970	93	0	0	0	1,288	589	0
64 SOUTHERN METHODIST UNIV	1,910	1,518	0	0	73	21	298	0
65 MEHARRY MEDICAL COLLEGE	1,903E	1,790E	0	0	68E	45E	0	0
66 ANTIOCH COLLEGE	1,809E	1,575E	23I	6I	63I	27I	106I	9I
67 WORCESTER POLY INSTITUTE	1,686	467	105	0	0	1,091	23	0
68 TUSKEGEE INSTITUTE	1,479E	1,349E	13I	3I	35I	15I	59I	5I
69 LOYOLA UNIVERSITY	1,436	1,175	57	0	109	59	5	31
70 THE MED COLL OF PENNA	1,313	1,081	0	0	78	137	0	17
TOTAL 1ST 70 INSTS.	1,097,240	874,950	25,400	4,559	66,124	32,064	63,282	30,861
71 TEXAS CHRISTIAN UNIV	1,308	866	109	51	92	50	140	0
72 TRINITY UNIVERSITY	1,217	734	43	62	162	0	216	0
73 FORDHAM UNIVERSITY	1,174	636	0	462	32	12	32	0
74 WESLEYAN UNIVERSITY	1,173	777	62	1	165	11	151	6
75 HEWTWORTH INSTITUTE	1,142	1,082	0	0	15	0	43	2
76 NOVA UNIVERSITY	1,126	910	0	0	88	0	0	128
77 CLARKSON COL OF TECH	1,095	855	0	0	7E	46E	185E	2E
78 GALLAUDET COLLEGE	1,052	584	0	0	0	0	420	48
79 LOMA LINDA UNIVERSITY	1,044	638	0	0	221	75	0	110
80 UNIVERSITY OF SANTA CLARA	935	773	6	0	6	4	27	119
TOTAL 1ST 80 INSTS.	1,108,506	882,805	25,620	5,135	66,912	32,262	64,496	31,276
81 UNIVERSITY OF THE PACIFIC	924E	381E	99E	0	321E	19E	104E	0
82 SETON HALL UNIVERSITY	895	600	100	0	70	5	120	0
83 MARQUETTE UNIVERSITY	839	480	5	17	49	23	189	76
84 FAIRLEIGH DICKINSON UNIV	804	162	143	298	28	98	19	36
85 U HLTH SCI/CHCGO MED SCH	798	494	61	0	108	19	107	9
86 NEW ENGLAND INSTITUTE	778	142	0	0	298	24	292	22
87 AMHERST COLLEGE	744	695	0	0	49	0	0	0
88 UNIV OF SAN FRANCISCO	688E	431E	25I	6I	70I	29I	117I	10I
89 ROCHESTER INST TECHNOLOGY	675	78	0	0	215	29	353	0
90 NEW SCH FOR SOC RESEARCH	646E	146E	10E	0	480E	3E	7E	0
TOTAL 1ST 90 INSTS.	1,116,297	886,434	26,063	5,456	68,600	32,511	65,804	31,429
91 FAIRFIELD UNIVERSITY	560	329	1	0	34	0	196	0
92 CLARK UNIVERSITY	559	446	1	0	12	0	70	30
93 FLORIDA INST OF TECH	556	396	0	0	77	29	54	0
94 CREIGHTON UNIVERSITY	545	358	0	0	59	51	56	21
95 LONG ISLAND UNIVERSITY	485E	328E	15I	3I	43I	18I	71I	7I
96 BRYN MAWR COLLEGE	483	415	36	0	32	0	0	0
97 INST TEXTILE TECHNOLOGY	450	0	0	0	0	400	0	50
98 HAVERFORD COLLEGE	441	384	0	0	12	0	45	0
99 DUQUESNE UNIVERSITY	426	395	10	0	20	1	0	0
100 BAYLOR UNIVERSITY	422	171	27	0	166	1	37	20
TOTAL 1ST 100 INSTS.	1,121,224	889,656	26,153	5,459	69,055	33,011	66,333	31,557
ALL OTHER INSTITUTES	15,899	9,282	537	58	2,162	1,244	1,965	651

a/ CONFIDENTAL

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-24. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	2,933,552	384,452	340,954	200,376	74,683	1,517,998	74,376	235,607	105,110
1 MASS INST OF TECHNOLOGY	125,413	73,535	21,084	4,827	8,681	10,105	1,340	4,983	850
2 UNIV OF WISCONSIN-MADISON	84,201	3,941	10,142	11,468	3,216	31,284	4,356	13,063	6,731
3 UNIVERSITY OF MICHIGAN	69,229	17,444	3,159	3,261	1,602	26,455	4,531	12,777	0
4 U OF CAL SAN DIEGO	66,789	749	9,731	27,975	335	27,043	495	257	204
5 HARVARD UNIVERSITY	58,480	665	8,501	4,391	601	33,295	903	9,697	427
6 CORNELL UNIVERSITY	57,453	6,485	9,742	334	909	35,537	203	4,011	232
7 COLUMBIA UNIV MAIN DIV	57,376	3,017	4,525	8,787	441	27,745	301	3,324	9,236
8 U OF CAL BERKELEY	56,692	10,645	9,545	692	1,558	23,804	2,137	7,144	1,167
9 STANFORD UNIVERSITY	53,984	9,233	8,524	2,609	3,339	22,989	700	5,775	815
10 UNIVERSITY OF MINNESOTA	53,447	4,774	3,907	932	882	33,946	1,023	5,032	2,951
TOTAL 1ST 10 INSTS.	683,064	130,488	88,860	65,276	21,564	272,203	15,989	66,063	22,621
11 UNIVERSITY OF WASHINGTON	53,424	4,216	4,132	8,064	358	34,940	584	984	150
12 U OF CAL LOS ANGELES	52,291	5,080	4,447	4,139	1,114	30,570	2,758	3,012	671
13 UNIVERSITY OF CHICAGO	51,711	0	9,070	1,667	1,095	34,427	576	4,876	0
14 JOHNS HOPKINS UNIVERSITY	42,268	968	2,232	3,136	160	33,895	413	1,074	390
15 UNIV OF PENNSYLVANIA	40,594	2,389	4,021	89	247	24,767	489	4,063	4,529
16 UNIV ILLINOIS URBANA	40,223	10,730	5,631	2,728	3,632	10,393	1,515	4,171	1,423
17 UNIVERSITY OF ROCHESTER	38,497	2,952	4,428	179	265	26,016	2,123	1,008	1,526
18 NEW YORK UNIVERSITY	37,219	2,304	2,296	953	2,988	24,994	861	2,550	193
19 UNIVERSITY OF COLORADO	34,365	1,281	7,663	281	787	14,330	1,686	2,075	6,262
20 YALE UNIVERSITY	34,200	1,438	4,741	960	440	23,469	1,138	2,014	0
TOTAL 1ST 20 INSTS.	1,107,856	161,926	137,521	87,472	33,146	530,004	28,132	91,890	37,765
21 TEXAS A & M UNIVERSITY	33,618	8,775	3,460	4,267	4'	15,995	21	535	524
22 U OF CAL DAVIS	33,247	2,662	1,085	180	111	27,271	80	1,858	0
23 MICHIGAN STATE UNIVERSITY	32,534	913	2,929	594	567	18,847	935	5,057	2,692
24 UNIV OF TEXAS AT AUSTIN	31,386	4,842	6,639	1,127	1,385	5,080	1,852	4,288	6,173
25 OHIO STATE UNIVERSITY	30,778	5,922	2,144	1,557	496	15,233	257	4,642	527
26 PENNSYLVANIA STATE UNIV	30,286E	4,529	3,269	4,144	128	10,191E	6588	4,798	2,569
27 U OF CAL SAN FRANCISCO	29,109	0	0	0	86	29,023	0	0	0
28 UNIVERSITY OF ARIZONA	27,764	1,680	7,537	3,621	147	11,302	1,001	2,476	0
29 PURDUE UNIV ALL CAMPUSES	27,315	6,775	3,142	288	957	13,216	638	1,971	328
30 UNIVERSITY OF FLORIDA	27,254	4,046	1,400	664	586	19,314	420	824	0
TOTAL 1ST 30 INSTS.	1,411,147	202,070	169,126	103,914	37,650	695,476	33,996	118,339	50,578
31 UNIVERSITY OF HAWAII	26,859	2,161	3,309	6,838	58	10,464	339	3,105	585
32 UNIVERSITY OF MIAMI	26,769	1,445	999	4,316	38	18,481	200	1,188	102
33 UNIVERSITY OF GEORGIA	26,310	737	2,525	0	737	15,549	921	5,841	0
34 WASHINGTON UNIV ST LOUIS	25,286	3,489	1,281	6	109	16,808	174	369	3,050
35 UNIV OF SOUTH CALIFORNIA	25,155	6,423	797	1,524	130	13,758	682	2,041	0
36 YESHIVA UNIVERSITY	24,916	0	1,174	0	392	22,302	1,048	0	0
37 N C STATE UNIV AT RALEIGH	24,856	3,453	307	780	688	16,620	119	985	1,904
38 UNIV OF NC AT CHAPEL HILL	24,644	2,087	1,007	72	285	14,187	288	384	6,334
39 ROCKEFELLER UNIVERSITY	24,103	0	1,333	0	485	19,895	2,390	0	0
40 UNIVERSITY OF UTAH	23,469	2,331	3,030	1,163	2,177	13,559	540	665	0
TOTAL 1ST 40 INSTS.	1,663,514	224,196	184,888	118,613	42,749	857,099	40,499	132,677	62,593
41 UNIV OF MISSOURI COLUMBIA	22,495	1,400	251	168	64	18,318	330	771	1,189
42 DUKE UNIVERSITY	22,261	683	2,141	0	225	17,357	542	417	896
43 RUTGERS THE STATE UNIV	21,939	1,375	2,874	1,782	942	9,196	917	3,931	922
44 COLORADO STATE UNIVERSITY	20,451	4,503	511	2,620	302	9,048	651	1,588	1,228
45 UNIV OF MD COLLEGE PARK	20,365	3,152	6,692	2,238	1,962	4,981	313	838	191

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	UNITED STATES, TOTAL	2,933,552	384,452	340,954	200,376	74,683	1,517,994	74,376	235,607	105,110
1	MASS INST OF TECHNOLOGY	125,413	73,535	21,084	4,827	8,681	10,105	1,340	4,983	858
2	UNIV OF WISCONSIN-MADISON	84,201	3,941	10,142	11,468	3,216	31,284	4,356	13,063	6,731
3	UNIVERSITY OF MICHIGAN	69,229	17,444	3,159	3,261	1,602	26,455	4,531	12,777	0
4	U OF CAL SAN DIEGO	66,789	749	9,731	27,975	335	27,043	695	257	204
5	HARVARD UNIVERSITY	58,480	665	8,501	4,391	601	33,295	903	9,697	627
6	CORNELL UNIVERSITY	57,453	6,485	9,742	334	909	35,537	203	4,011	232
7	COLUMBIA UNIV MAIN DIV	57,376	3,017	4,525	8,787	441	27,745	301	3,329	9,236
8	U OF CAL BERKELEY	56,692	10,645	9,545	492	1,558	23,804	2,137	7,144	1,167
9	STANFORD UNIVERSITY	53,984	9,233	8,524	2,609	3,339	22,989	700	5,775	815
10	UNIVERSITY OF MINNESOTA	53,447	4,774	3,907	932	882	33,946	1,023	5,032	2,951
	TOTAL 1ST 10 INSTS.	683,064	130,488	88,860	65,276	21,564	272,203	15,989	66,063	22,621
11	UNIVERSITY OF WASHINGTON	53,424	4,216	4,132	8,064	354	34,940	584	984	150
12	U OF CAL LOS ANGELES	52,291	5,080	4,447	4,139	1,614	30,570	2,758	3,012	671
13	UNIVERSITY OF CHICAGO	51,711	0	9,070	1,667	1,095	34,427	576	4,876	0
14	JOHNS HOPKINS UNIVERSITY	42,268	968	2,232	3,171	160	33,895	413	1,074	355
15	UNIV OF PENNSYLVANIA	40,594	2,389	4,021	89	247	24,767	489	4,063	4,529
16	UNIV ILLINOIS URBANA	40,223	10,730	5,631	2,728	3,632	10,393	1,515	4,171	1,423
17	UNIVERSITY OF ROCHESTER	38,497	2,952	4,428	179	265	26,016	2,123	1,008	1,526
18	NEW YORK UNIVERSITY	37,219	2,384	2,296	953	2,988	24,994	861	2,550	193
19	UNIVERSITY OF COLORADO	34,365	1,281	7,663	281	787	14,330	1,686	2,075	6,262
20	YALE UNIVERSITY	34,200	1,438	4,741	960	440	23,469	1,138	2,014	0
	TOTAL 1ST 20 INSTS.	1,107,856	161,926	137,521	87,472	33,146	530,004	28,132	91,890	37,765
21	TEXAS A & M UNIVERSITY	33,618	8,775	3,460	4,267	41	15,995	21	535	524
22	U OF CAL DAVIS	33,247	2,662	1,085	180	111	27,271	80	1,858	0
23	MICHIGAN STATE UNIVERSITY	32,534	913	2,929	594	567	18,847	935	5,057	2,692
24	UNIV OF TEXAS AT AUSTIN	31,386	4,842	6,639	1,127	1,285	5,080	1,852	8,288	6,173
25	OHIO STATE UNIVERSITY	30,778	5,922	2,144	1,557	496	15,233	257	4,662	527
26	PENNSYLVANIA STATE UNIV	30,286E	4,529	3,269	4,144	128	10,191E	6588	4,799	2,569
27	U OF CAL SAN FRANCISCO	29,109	0	0	0	86	29,023	0	0	0
28	UNIVERSITY OF ARIZONA	27,764	1,680	7,537	3,621	147	11,302	1,001	2,476	0
29	PURDUE UNIV ALL CAMPUSES	27,315	6,775	3,142	288	957	13,216	630	1,971	336
30	UNIVERSITY OF FLORIDA	27,254	4,046	1,400	664	586	19,314	420	826	0
	TOTAL 1ST 30 INSTS.	1,411,147	202,070	169,126	103,914	37,650	695,476	33,994	118,339	50,578
31	UNIVERSITY OF HAWAII	26,859	2,161	3,309	6,838	58	10,464	339	3,105	585
32	UNIVERSITY OF MIAMI	26,769	1,485	999	4,316	38	18,481	280	1,188	182
33	UNIVERSITY OF GEORGIA	26,310	737	2,525	0	737	15,549	921	5,841	0
34	WASHINGTON UNIV ST LOUIS	25,286	3,489	1,281	6	109	16,808	176	369	3,050
35	UNIV OF STATE CALIFORNIA	25,155	6,423	797	1,524	130	13,758	482	2,041	0
36	YESHIVA UNIVERSITY	24,916	0	1,174	0	392	22,302	1,048	0	0
37	N C STATE UNIV AT RALEIGH	24,856	3,453	307	780	688	16,620	119	985	1,904
38	UNIV OF NC AT CHAPEL HILL	24,644	2,087	1,007	72	285	14,187	288	384	6,334
39	ROCKEFELLER UNIVERSITY	24,103	0	1,333	0	485	19,895	2,390	0	0
40	UNIVERSITY OF UTAH	23,469	2,331	3,030	1,163	2,177	13,559	540	665	0
	TOTAL 1ST 40 INSTS.	1,663,514	224,196	184,888	118,613	42,749	857,099	40,499	132,877	62,593
41	UNIV OF MISSOURI COLUMBIA	22,495	1,400	251	168	64	18,318	334	731	1,189
42	DUKE UNIVERSITY	22,261	683	2,141	0	225	17,357	542	417	896
43	RUTGERS THE STATE UNIV	21,939	1,375	2,874	1,782	942	9,196	917	3,931	922
44	COLORADO STATE UNIVERSITY	20,451	4,503	511	2,620	302	9,048	651	1,588	1,228
45	UNIV OF MD COLLEGE PARK	20,365	3,152	6,692	2,234	1,962	4,991	313	830	191
46	OREGON STATE UNIVERSITY	20,241	1,052	809	5,443	200	11,849	0	888	0
47	PRINCETON UNIVERSITY	18,696	4,867	6,546	1,064	992	2,050	943	2,234	0
48	CALIFORNIA INST OF TECH	18,653	4,494	7,885	3,120	223	3,106	0	392	223
49	CASE WESTERN RESERVE UNIV	17,963	4,796	2,146	305	168	9,826	107	617	0
50	UNIVERSITY OF KANSAS	17,925	1,814	1,171	1,284	370	9,010	2,389	1,971	0
	TOTAL 1ST 50 INSTS.	1,864,503	252,332	215,214	136,633	48,195	951,650	46,611	146,426	67,242

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

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TABLE B-24. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 LA ST U BATON ROUGE	16,568	1,003	1,969	2,008	321	10,524	357	386	0
52 UNIVERSITY OF ALASKA	16,560	447	4,984	5,247	2	4,150	0	1,730	0
53 IOWA ST U OF SCI & TECH	16,525	2,902	986	115	961	9,289	83	2,060	129
54 UNIVERSITY OF CONNECTICUT	16,381	1,748	574	930	740	10,076	668	1,645	0
55 NORTHWESTERN UNIVERSITY	16,261	1,786	2,258	176	343	8,186	336	681	2,495
56 WASHINGTON STATE UNIV	15,402	2,957	906	906	274	9,248	136	975	0
57 UNIVERSITY OF IOWA	15,386	637	3,527	31	326	9,901	234	730	0
58 BAYLOR COLLEGE OF MED	15,134	0	0	0	0	15,134	0	0	0
59 UNIVERSITY OF PITTSBURGH	15,048	613	2,936	163	70	10,520	315	237	194
60 CARNEGIE-MELLON UNIV	14,850	3,857	6,450	0	2,047	445	477	1,058	516
TOTAL 1ST 60 INSTS.	2,022,618	268,282	239,804	146,209	53,279	1,039,323	49,217	155,928	70,576
61 WOODS HOLE OCEANOGRAPHIC INST	14,342	2,901	0	10,037	0	1,404	0	0	0
62 UNIV OF NEBRASKA - LNCLN	13,970	1,117	676	1,317	128	9,918	48	766	0
63 U OF CAL RIVERSIDE	13,960	1,514	1,409	1,780	245	8,544	81	387	0
64 VANDERBILT UNIVERSITY	13,683	375	780	24	49	11,759	238	458	0
65 OKLAHOMA STATE UNIVERSITY	13,416	2,132	344	98	0	7,031	147	49	3,615
66 VIRGINIA POLYTECHNIC INST	13,380	2,169	1,757	517	301	7,086	14	315	1,221
67 U OF TEX M D ANDERSON HOS	13,264	0	1,645	0	999	10,620	0	0	0
68 UNIV OF KENTUCKY ALL CAM	12,594	1,128	401	123	45	8,481	123	994	1,299
69 KANSAS ST UNIVERSITY	12,457	1,044	355	1,092	222	8,569	75	610	490
70 TULANE UNIVERSITY	12,392	633	150	8	308	10,756	202	167	168
TOTAL 1ST 70 INSTS.	2,156,076	281,295	247,321	161,205	55,576	1,123,491	50,145	159,674	77,369
71 GEORGIA INSTITUTE OF TECH	12,263	7,625	2,568	254	560	258	57	808	133
72 GEORGE WASHINGTON UNIV	12,150	1,831	71	178	625	6,808	318	2,037	282
73 UNIVERSITY OF CINCINNATI	12,142	1,505	329	37	120	9,013	114	55	969
74 SYRACUSE UNIVERSITY	11,988	3,931E	2,405E	0	716	1,033	219	1,429	2,255
75 CONT MT SINAI SCH OF MED	11,785	0	0	0	0	11,785	0	0	0
76 TEMPLE UNIVERSITY	11,732	59	418	3	60	8,891	333	1,787	181
77 UNIV ALABAMA BIRMINGHAM	11,568	0	42	0	0	11,510	12	24	0
78 FLORIDA STATE UNIVERSITY	11,324	25	3,959	1,358	756	1,231	1,072	2,923	0
79 MISSISSIPPI STATE UNIV	11,113	927	425	0	86	8,979	9	687	0
80 UNIVERSITY OF VIRGINIA	11,027	3,006	1,653	497	320	4,867	189	122	373
TOTAL 1ST 80 INSTS.	2,273,188	300,204	259,191	163,532	58,819	1,187,866	52,468	169,546	81,562
81 SUNY BUFFALO	10,380	998	871	65	812	6,086	284	1,225	119
82 UTAH STATE UNIVERSITY	9,837	3,489	46	1,419	185	4,338	54	346	0
83 INDIANA UNIVERSITY-PURDUE	9,765	0	0	0	0	9,682	0	83	0
84 SUNY UPSTATE MEDICAL CTR	9,486	0	0	0	103	9,383	0	0	0
85 AUBURN UNIVERSITY	9,464	1,353	0	1,118	0	6,577	0	416	0
86 BOSTON UNIVERSITY	9,237	86	345	0	0	8,067	13	86	640
87 INDIANA UNIV-BLOOMINGTON	9,214	0	3,546	123	434	1,364	368	1,465	1,914
88 UNIV OF MASS AT AMHERST	9,180	1,393	2,013	1,772	248	2,108	683	1,043	0
89 BROWN UNIVERSITY	9,075	2,014	1,571	546	1,253	2,418	391	461	421
90 UNIV OF RHODE ISLAND	8,855	1,581E	1,799E	0	474E	3,222E	455E	1,324E	0
TOTAL 1ST 90 INSTS.	2,367,681	311,118	269,382	168,575	62,288	1,241,111	54,556	175,995	84,656
91 UNIVERSITY OF IDAHO	8,572	586	297	282	0	5,870	2	571	1,364
92 SUNY STONY BROOK	8,540	1,012	2,068	1,128	794	1,812	567	383	796
93 EMORY UNIVERSITY	8,232	0	260	0	10	7,785	83	20	74E
[illegible]	7,771	0	74E	0	18E	5,002	18E	157	1,437

			ENGRNG	SCIENCES	RENTAL	MATICS	SCIENCES	OGY	SCIENCES	SCIENCES
51	LA ST U BATON ROUGE	16,568	1,003	1,969	2,008	321	10,524	327	386	0
52	UNIVERSITY OF ALASKA	16,560	447	4,984	5,247	2	4,150	0	1,730	0
53	IOWA ST U OF SCI & TECH	16,525	2,902	986	115	961	9,289	83	2,060	129
54	UNIVERSITY OF CONNECTICUT	16,381	1,748	574	930	740	10,076	668	1,645	0
55	NORTHWESTERN UNIVERSITY	16,261	1,786	2,258	176	343	8,186	336	681	2,495
56	WASHINGTON STATE UNIV	15,402	2,957	906	906	274	9,248	136	975	0
57	UNIVERSITY OF IOWA	15,386	637	3,527	31	326	9,901	236	730	0
58	BAYLOR COLLEGE OF MED	15,134	0	0	0	0	15,134	0	0	0
59	UNIVERSITY OF PITTSBURGH	15,048	613	2,936	163	70	10,520	315	237	194
60	CARNEGIE-MELLON UNIV	14,850	3,857	6,850	0	2,047	445	477	1,050	516
	TOTAL 1ST 60 INSTS.	2,022,618	268,282	239,804	146,209	53,279	1,039,323	49,217	155,928	70,576
61	WOODS HOLE OCNGRPHIC INST	14,342	2,901	0	10,037	0	1,404	0	0	0
62	UNIV OF NEBRASKA - LNCLN	13,970	1,117	676	1,317	128	9,918	48	766	0
63	U OF CAL RIVERSIDE	13,960	1,514	1,409	1,780	245	8,544	81	387	0
64	VANDERBILT UNIVERSITY	13,683	375	780	24	49	11,759	238	458	0
65	OKLAHOMA STATE UNIVERSITY	13,416	2,132	344	98	0	7,031	147	49	3,615
66	VIRGINIA POLYTECHNIC INST	13,380	2,169	1,757	517	301	7,086	14	315	1,221
67	U OF TEX M D ANDERSON HOS	13,264	0	1,665	0	999	10,620	0	0	0
68	UNIV OF KENTUCKY ALL CAM	12,594	1,128	401	123	45	8,481	123	998	1,299
69	KANSAS ST UNIVERSITY	12,457	1,044	355	1,092	222	8,569	75	610	490
70	TULANE UNIVERSITY	12,392	633	150	8	308	10,756	282	147	168
	TOTAL 1ST 70 INSTS.	2,156,076	281,295	247,321	161,205	55,576	1,123,491	50,185	159,678	77,369
71	GEORGIA INSTITUTE OF TECH	12,263	7,625	2,568	254	560	258	57	808	133
72	GEORGE WASHINGTON UNIV	12,150	1,831	71	178	625	6,808	378	2,037	282
73	UNIVERSITY OF CINCINNATI	12,142	1,505	329	37	120	9,013	116	55	969
74	SYRACUSE UNIVERSITY	11,988	3,931E	2,405E	0	716	1,033	218	1,429	2,255
75	CUNY ST SINAI SCH OF MED	11,785	0	0	0	0	11,785	0	0	0
76	TEMPLE UNIVERSITY	11,732	59	418	3	60	8,891	333	1,787	181
77	UNIV ALABAMA BIRMINGHAM	11,588	0	42	0	0	11,510	12	24	0
78	FLORIDA STATE UNIVERSITY	11,324	25	3,959	1,358	756	1,231	1,072	2,923	0
79	MISSISSIPPI STATE UNIV	11,113	927	425	0	86	8,979	9	687	0
80	UNIVERSITY OF VIRGINIA	11,027	3,006	1,653	497	320	4,867	189	122	373
	TOTAL 1ST 80 INSTS.	2,273,188	300,204	259,191	163,532	58,819	1,187,866	52,468	169,546	81,562
81	SUNY BUFFALO	10,380	998	871	65	812	6,086	204	1,225	119
82	UTAH STATE UNIVERSITY	9,837	3,489	46	1,419	145	4,338	54	346	0
83	INDIANA UNIVERSITY-PURDUE	9,765	0	0	0	0	9,682	0	83	0
84	SUNY UPSTATE MEDICAL CTR	9,486	0	0	0	103	9,383	0	0	0
85	AUBURN UNIVERSITY	9,464	1,353	0	1,118	0	6,577	0	416	0
86	BOSTON UNIVERSITY	9,237	86	345	0	0	8,067	13	86	640
87	INDIANA UNIV-BLOOMINGTON	9,214	0	3,546	123	434	1,364	368	1,465	1,914
88	UNIV OF MASS AT AMHERST	9,180	1,393	2,013	1,772	288	2,108	603	1,043	0
89	BROWN UNIVERSITY	9,075	2,014	1,571	546	1,253	2,418	391	461	421
90	UNIV OF RHODE ISLAND	8,855	1,581E	1,799E	0	474E	3,222E	955E	1,324E	0
	TOTAL 1ST 90 INSTS.	2,367,681	311,118	269,382	168,575	62,288	1,241,111	56,556	175,995	84,656
91	UNIVERSITY OF IDAHO	8,572	586	297	282	0	5,470	2	571	1,364
92	SUNY STONY BROOK	8,540	1,012	2,068	1,128	794	1,812	547	283	796
93	EMORY UNIVERSITY	8,232	0	260	0	10	7,785	83	20	74E
94	GEORGETOWN UNIVERSITY	7,771	0	788	0	194	5,002	993	157	1,637
95	UNIVERSITY OF ARKANSAS	7,638	486	283	933	4	5,153	2	734	32
96	TUFTS UNIVERSITY	7,436	257	401	0	10	6,216	28	464	60
97	UNIV OF VT & ST AGRIC COL	7,188	84	287	135	5	5,871	815	348	125
98	UNIVERSITY OF NEW MEXICO	7,093	2,419E	309E	306E	72E	2,762E	279E	136E	810E
99	U TENN MED UNITS MEMPHIS	7,081	0	0	0	0	7,081	0	0	0
100	WEST VIRGINIA UNIVERSITY	6,851	2,030	56	4	0	4,440	55	266	0
	TOTAL 1ST 100 INSTS.	2,444,083	317,994	274,051	171,363	63,377	1,292,703	56,171	179,078	89,356

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-24. CONTINUED

CURRENT RED EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 VIRGINIA COMMONWLTH UNIV	6,850	0	0	0	0	6,850	0	0	0
102 NEW MEXICO STATE UNIV	6,849	3,896	436	376	49	419	171	1,502	0
103 UNIV OF MD BALTIMORE	6,812	0	0	0	0	6,812	0	0	0
104 U OF CAL IRVINE	6,776	285	1,832	0	168	4,163	0	328	0
105 CLEMSON UNIVERSITY	6,744	556	93	294	46	4,941	0	374	440
106 UNIVERSITY OF OREGON	6,697	0	1,401	347	155	1,350	610	2,796	38
107 MONTANA STATE UNIVERSITY	6,692	1,209	495	381	6	4,414	0	187	0
108 UNIVERSITY OF WYOMING	6,676	544	1,568	1,402	2	2,683	137	287	55
109 UNIVERSITY OF DENVER	6,611	2,570	1,240	36	203	240	404	1,836	84
110 BRANDEIS UNIVERSITY	6,601	0	1,264	0	174	2,422	48	2,014	679
TOTAL 1ST 110 INSTS.	2,511,393	327,054	282,380	174,199	64,180	1,326,997	57,541	186,392	90,650
111 ALBANY MED COL OF UNION U	6,598	0	0	0	0	6,598	0	0	0
112 U OF ILL MEDICAL CENTER	6,554	0	23	0	0	6,531	0	0	0
113 U TEX GALVESTON MED BRAN	6,534	0	0	0	0	6,534	0	0	0
114 UNIV OF MAINE ORONO	6,438	333	230	1,757	0	3,200	101	817	0
115 UNIVERSITY OF DAYTON	6,395	3,999	1,433	31	515	376	0	4	37
116 WAYNE STATE UNIVERSITY	6,386	961	868	11	60	3,207	365	512	402
117 UNIV OF MISSISSIPPI	6,278	268	160	33	0	5,303	110	404	0
118 U TEX HLTH SCI CTR DALLAS	6,258	0	0	0	0	6,258	0	0	0
119 U OF OREGON MED SCHOOL	6,036E	0	0	0	0	6,036E	0	0	0
120 UNIV OKLAHOMA	5,937E	607	282	417	377	3,249E	93	747	965
TOTAL 1ST 120 INSTS.	2,574,607	333,222	285,376	176,449	65,132	1,374,289	58,010	188,876	91,654
121 RICE UNIVERSITY	5,927	1,598	2,767	321	350	452	10	669	0
122 UNIVERSITY OF DELAWARE	5,760	1,438	927	1,392	51	1,320	236	396	0
123 SUNY DOWNSTATE MED CTR	5,568	0	0	0	0	5,568	0	0	0
124 ST LOUIS UNIV	5,548	302	90	285	0	4,549	16	33	273
125 RENSSELAER POLY INST	5,382E	3,409E	1,283E	186E	250E	212E	17E	0	25E
126 SUNY ALBANY	5,263	0	561	1,403	180	1,147	60	1,677	237
127 NORTH DAKOTA STATE UNIV	5,263	29	56	343	0	4,835	0	0	0
128 INDIANA - PU NORTHWEST	5,082	0	0	0	0	0	0	5,082	0
129 THE MED COLL OF WISCONSIN	5,066	0	0	0	0	5,066	0	0	0
130 U OF CAL SANTA BARBARA	4,939	252	1,618	510	702	776	662	439	0
TOTAL 1ST 130 INSTS.	2,628,605	340,250	292,650	180,888	66,665	1,398,214	59,021	198,950	91,959
131 DARTMOUTH COLLEGE	4,918	491	347	268	172	3,189	209	64	168
132 THOM JEFFERSON UNIV HOSP	4,847	0	0	0	0	4,847	0	0	0
133 UNIV OF MO SYSTEM OFC	4,706	0	0	521	0	4,124	0	39	22
134 LEHIGH UNIVERSITY	4,654	2,687	602	369	523	85	27	12	349
135 NEW YORK MEDICAL COLLEGE	4,615	0	0	0	0	4,615	0	0	0
136 UNIVERSITY OF NOTRE DAME	4,527	880	2,342	0	128	1,062	38	97	0
137 MUSH MEDICAL COLLEGE	4,485	0	0	0	0	4,076	85	0	324
138 SOUTH DAKOTA STATE UNIV	4,472	365	14	33	0	3,348	0	270	442
139 BOSTON COLLEGE	4,102E	0	646E	351E	1,002E	167E	48	1,304E	684E
140 U TENNESSEE KNOXVILLE	4,067	2,014	672	32	41	786	140	351	27
TOTAL 1ST 140 INSTS.	2,679,078	346,687	297,287	182,462	68,531	1,424,493	59,536	201,149	93,933
141 UNIV OF MISSOURI ROLLA	4,059	3,130	624	81	200	0	0	1	25
142 TEXAS TECH UNIVERSITY	4,037	1,436	584	57	86	1,470	16	235	173
143 UNIV OF NEW HAMPSHIRE	3,856	823	834	213	31	1,665	172	130	0
144 U TEX HLTH SCI CR HOUSTON	3,812	0	0	0	0	3,812	0	0	0
145 U OF NEB MED C AT OMAHA	3,706E	0	0	0	0	3,706E	0	0	0
146 WAKE FOREST UNIVERSITY	3,701E	0	55	0	14	3,320E	49	202E	61

103 UNIV OF MD BALTIMORE	6,812	0	0	0	0	6,812	0	0	0
104 U OF CAL IRVINE	6,776	285	1,832	0	168	4,163	0	328	0
105 CLEMSON UNIVERSITY	6,744	556	93	294	46	4,941	0	374	440
106 UNIVERSITY OF OREGON	6,697	0	1,401	347	155	1,350	610	2,796	38
107 MONTANA STATE UNIVERSITY	6,692	1,209	495	381	6	4,414	0	187	0
108 UNIVERSITY OF WYOMING	6,678	544	1,568	1,402	2	2,683	137	287	55
109 UNIVERSITY OF DENVER	6,611	2,570	1,240	36	203	240	404	1,834	84
110 BRANDEIS UNIVERSITY	6,601	0	1,264	0	174	2,422	48	2,014	679
TOTAL 1ST 110 INSTS.	2,511,393	327,054	282,380	174,199	64,180	1,326,997	57,541	188,392	90,650
111 ALBANY MED COL OF UNION U	6,598	0	0	0	0	6,598	0	0	0
112 U OF ILL MEDICAL CENTER	6,554	0	23	0	0	6,531	0	0	0
113 U TEX GALVESTON MED BRAN	6,534	0	0	0	0	6,534	0	0	0
114 UNIV OF MAINE ORONO	6,438	333	230	1,757	0	3,200	101	817	0
115 UNIVERSITY OF DAYTON	6,395	3,999	1,433	31	515	376	0	4	37
116 WAYNE STATE UNIVERSITY	6,386	961	868	11	60	3,207	165	512	602
117 UNIV OF MISSISSIPPI	6,278	268	160	33	0	5,303	110	404	0
118 U TEX HLTH SCI CTR DALLAS	6,258	0	0	0	0	6,258	0	0	0
119 U OF OREGON MED SCHOOL	6,036E	0	0	0	0	6,036E	0	0	0
120 UNIV OKLAHOMA	5,937E	607	282	417	377	3,249E	93	747	165
TOTAL 1ST 120 INSTS.	2,574,807	333,222	285,376	176,448	65,132	1,374,289	58,010	190,876	91,454
121 RICE UNIVERSITY	5,927	1,598	2,747	321	350	452	10	449	0
122 UNIVERSITY OF DELAWARE	5,760	1,438	927	1,392	51	1,320	238	394	0
123 SUNY DOWNSTATE MED CTR	5,568	0	0	0	0	5,568	0	0	0
124 ST LOUIS UNIV	5,548	302	90	285	0	4,549	16	33	273
125 RENSSELAER POLY INST	5,382E	3,409E	1,283E	186E	250E	212E	17E	0	25E
126 SUNY ALBANY	5,263	0	561	1,403	180	1,147	88	1,677	207
127 NORTH DAKOTA STATE UNIV	5,263	29	56	343	0	4,835	0	0	0
128 INDIANA UNIV NORTHWEST	5,082	0	0	0	0	0	0	5,082	0
129 THE MED COLL OF WISCONSIN	5,066	0	0	0	0	5,066	0	0	0
130 U OF CAL SANTA BARBARA	4,939	252	1,618	510	702	776	642	439	0
TOTAL 1ST 130 INSTS.	2,628,605	340,250	292,658	180,888	66,665	1,398,214	59,021	198,950	91,959
131 DARTMOUTH COLLEGE	4,918	491	347	268	172	3,189	219	64	168
132 THOM JEFFERSON UNIV HOSP	4,847	0	0	0	0	4,847	0	0	0
133 UNIV OF MO SYSTEM OFC	4,706	0	0	521	0	4,124	0	39	22
134 LEHIGH UNIVERSITY	4,654	2,687	602	369	523	85	27	12	349
135 NEW YORK MEDICAL COLLEGE	4,615	0	0	0	0	4,615	0	0	0
136 UNIVERSITY OF NOTRE DAME	4,527	880	2,342	0	128	1,042	38	97	0
137 RUSH MEDICAL COLLEGE	4,485	0	0	0	0	4,076	85	0	324
138 SOUTH DAKOTA STATE UNIV	4,472	365	14	33	0	3,348	0	270	442
139 BOSTON COLLEGE	4,182E	0	646E	351E	1,002E	167E	4E	1,366E	646E
140 U TENNESSEE KNOXVILLE	4,067	2,014	672	32	41	786	144	351	27
TOTAL 1ST 140 INSTS.	2,674,078	346,687	297,281	182,462	68,531	1,424,493	59,538	201,149	93,937
141 UNIV OF MISSOURI ROLLA	4,059	3,130	624	81	200	0	8	1	15
142 TEXAS TECH UNIVERSITY	4,037	1,438	584	57	86	1,470	14	215	173
143 UNIV OF NEW HAMPSHIRE	3,856	823	834	213	31	1,645	172	138	0
144 U TEX HLTH SCI CR HOUSTON	3,812	0	0	0	0	3,812	0	0	0
145 U OF NEB MED C AT OMAHA	3,706E	0	0	0	0	3,706E	0	0	0
146 WAKE FOREST UNIVERSITY	3,701E	0	55	0	14	3,320E	49	202E	61
147 HOWARD UNIVERSITY	3,680E	120E	290E	0	0	2,364E	41E	810E	55E
148 U OF WIS MILWAUKEE	3,665	805	479	987	122	195	90	395	592
149 S U N Y SYSTEM OFFICE	3,572	418I	413I	299I	81I	1,873I	101I	262I	125I
150 STEVENS INSTITUTE OF TECH	3,498	2,326	917	0	0	0	260	0	0
TOTAL 1ST 150 INSTS.	2,711,664	355,747	301,472	184,099	69,065	1,442,878	60,273	203,172	94,958

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-24. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
151 COL OF MED & DENT OF N J	3,457	0	0	0	0	3,457	0	0	0
152 GEO PEABODY COL TEACHERS	3,378	0	0	0	11	0	2,479	0	888
153 U PUERTO RICO SAN JUAN	3,300E	0	0	0	0	3,300E	0	0	0
154 U TEX HLTH SCI CR SAN ANT	3,285	0	0	0	0	3,285	0	0	0
155 POLYTECHNIC INST OF N Y	3,239	2,648	461	0	50	0	0	0	80
156 U OF NEV DESERT RES INST	3,239	0	3,239	0	0	0	0	0	0
157 LA ST U MED CTR N ORLEANS	3,231	0	0	0	0	3,231	0	0	0
158 HAHNEMAN MEDICAL COLLEGE	3,111	0	0	0	0	3,111	0	0	0
159 UNIV OF NEVADA - RENO	3,049	79	175	556	1	1,768	115	355	0
160 UNIVERSITY OF HOUSTON	3,044	622	804	54	80	448	489	546	1
TOTAL 1ST 160 INSTS.	2,743,997	359,096	306,151	184,709	69,207	1,461,478	63,356	204,073	95,927
161 US NAVAL POSTGRAD SCHOOL	2,925	1,146	373	522	848	0	0	36	0
162 SAN DIEGO ST UNIVERSITY	2,842	49	316	72	0	656	811	291	647
163 a/	2,836C	1,032	815	29	201	243	160	281	75
164 ILLINOIS INST OF TECH	2,834	933	584	96	200	300	158	156	407
165 SUNY COL OF ENV SCI & FOR	2,808	245	1,067	739	0	721	0	36	0
166 U OF CAL SANTA CRUZ	2,769	0	2,524	0	100	0	0	145	0
167 SOUTHERN ILLINOIS UNIV	2,754	19	253	177	25	961	149	318	852
168 UNIVERSITY OF LOUISVILLE	2,751	34	92	9	0	1,977	290	259	90
169 MEDICAL COLL OF GEORGIA	2,724	0	0	0	0	2,724	0	0	0
170 BRIGHAM YOUNG UNIVERSITY	2,698E	451E	634E	22E	145E	953E	56E	437E	0
TOTAL 1ST 170 INSTS.	2,771,938	363,005	312,809	186,375	70,726	1,470,013	64,980	206,032	97,998
171 NC AG & TECH STATE UNIV	2,695	159	163	0	11	449	119	1,669	125
172 U PUERTO RICO MAYAGUEZ	2,670	82	1,950	66	0	397	0	1	174
173 N MEX INST MINING & TECH	2,534	943	238	1,282	21	49	1	0	0
174 CATHOLIC UNIV OF AMERICA	2,488	1,404	725	0	20	30	171	138	0
175 DREXEL UNIVERSITY	2,358E	377I	300I	115I	67I	1,214I	51I	155I	79I
176 MED UNIV OF SO CAROLINA	2,305	0	0	0	0	2,305	0	0	0
177 U OF ARKANSAS MED CENTER	2,249	0	0	0	0	2,249	0	0	0
178 U OF NO K C	2,247	0	172	33	17	1,879	1	128	17
179 ARIZONA STATE UNIVERSITY	2,242	392	857	77	51	287	101	477	0
180 MICHIGAN TECH UNIVERSITY	2,207	2,002	63	34	0	75E	0	0	33
TOTAL 1ST 180 INSTS.	2,795,933	368,364	317,277	187,982	70,913	1,478,947	65,424	208,600	98,426
181 AMERICAN UNIVERSITY THE	2,143	0	295	0	0	178	141	1,529	0
182 ADELPHI UNIV	2,134	0	85	59	38	752	293	560	347
183 U OF CAL UNIV-WIDE PROGS	1,991	152	0	1	0	1,838	0	0	0
184 SUNY COLLEGE BROCKPORT	1,985	0	290	393	112	505	40	170	475
185 INSTITUTE PAPER CHEMISTRY	1,970	440	1,123	382	25	0	0	0	0
186 UNIV OF SOUTH FLORIDA	1,956	220	347	6	5	787	58	533	0
187 SOUTHERN METHODIST UNIV	1,910	559	48	507	77	20	13	554	132
188 MEHARRY MEDICAL COLLEGE	1,903E	0	0	0	0	1,903E	0	0	0
189 UNIV OF SOUTH CAROLINA	1,841	272	215	174	52	334	150	644	0
190 CUNY CITY COLLEGE	1,833E	214I	207I	151I	41I	965I	51I	138I	66I
TOTAL 1ST 190 INSTS.	2,815,599	370,221	319,887	189,655	71,263	1,486,229	66,170	212,728	99,446
191 OLD DOMINION UNIVERSITY	1,829	660	738	0	26	230	85	90	0
192 ANTIOCH COLLEGE	1,809E	123I	479I	96I	33I	283I	153I	528I	114I
193 UNIV OF ILL CHICAGO CIR	1,775	612	299	38	225	394	161	46	0
194 MED COLL OHIO AT TOLEDO	1,740	0	0	0	0	1,740	0	0	0

152	GEO PEABODY COL TEACHERS	3,378	0	0	0	11	0	2,479	0	888
153	U PUERTO RICO SAN JUAN	3,300E	0	0	0	0	3,300E	0	0	0
154	U TEX HLTH SCI CR SAN ANT	3,285	0	0	0	0	3,285	0	0	0
155	POLYTECHNIC INST OF N Y	3,239	2,648	461	0	50	0	0	0	80
156	U OF NEV DESERT RES INST	3,239	0	3,239	0	0	0	0	0	0
157	LA ST U MED CTR N ORLEANS	3,231	0	0	0	0	3,231	0	0	0
158	HAHNEMAN MEDICAL COLLEGE	3,111	0	0	0	0	3,111	0	0	0
159	UNIV OF NEVADA - RENO	3,049	79	175	556	1	1,768	115	355	0
160	UNIVERSITY OF HOUSTON	3,044	622	804	54	80	448	489	546	1
	TOTAL 1ST 160 INSTS.	2,743,997	359,096	306,151	184,709	69,207	1,461,478	63,356	204,073	95,927
161	US NAVAL POSTGRAD SCHOOL	2,925	1,146	373	522	848	0	0	36	0
162	SAN DIEGO ST UNIVERSITY	2,842	49	316	72	0	656	811	291	647
163	a/	2,836C	1,032	815	29	201	243	160	281	75
164	ILLINOIS INST OF TECH	2,834	933	584	96	200	300	158	156	407
165	SUNY COL OF ENV SCI & FOR	2,808	245	1,067	739	0	721	0	36	0
166	U OF CAL SANTA CRUZ	2,769	0	2,524	0	100	0	0	145	0
167	SOUTHERN ILLINOIS UNIV	2,754	19	253	177	25	961	149	318	852
168	UNIVERSITY OF LOUISVILLE	2,751	34	92	9	0	1,977	290	259	90
169	MEDICAL COLL OF GEORGIA	2,724	0	0	0	0	2,724	0	0	0
170	BRIGHAM YOUNG UNIVERSITY	2,698E	451E	634E	22E	145E	953E	56E	437E	0
	TOTAL 1ST 170 INSTS.	2,771,938	363,005	312,809	186,375	70,726	1,470,013	64,980	206,032	97,998
171	NC AG & TECH STATE UNIV	2,695	159	163	0	11	449	119	1,669	125
172	U PUERTO RICO MAYAGUEZ	2,670	82	1,950	66	0	397	0	1	174
173	N MEX INST MINING & TECH	2,534	943	238	1,282	21	49	1	0	0
174	CATHOLIC UNIV OF AMERICA	2,488	1,404	725	0	20	30	171	138	0
175	DREXEL UNIVERSITY	2,358E	377I	300I	115I	67I	1,214I	51I	155I	79I
176	MED UNIV OF SO CAROLINA	2,305	0	0	0	0	2,305	0	0	0
177	U OF ARKANSAS MED CENTER	2,249	0	0	0	0	2,249	0	0	0
178	U OF NO K C	2,247	0	172	33	17	1,879	1	128	17
179	ARIZONA STATE UNIVERSITY	2,242	392	857	77	51	287	101	477	0
180	MICHIGAN TECH UNIVERSITY	2,207	2,002	63	34	0	75E	0	0	33
	TOTAL 1ST 180 INSTS.	2,795,933	368,364	317,277	187,982	70,913	1,478,947	65,424	208,600	98,426
181	AMERICAN UNIVERSITY THE	2,143	0	295	0	0	178	141	1,529	0
182	ADELPHI UNIV	2,134	0	85	59	38	752	293	560	347
183	U OF CAL UNIV-WIDE PRGMS	1,991	152	0	1	0	1,838	0	0	0
184	SUNY COLLEGE BROCKPORT	1,985	0	290	393	112	505	40	170	475
185	INSTITUTE PAPER CHEMISTRY	1,970	440	1,123	382	25	0	0	0	0
186	UNIV OF SOUTH FLORIDA	1,956	220	347	6	5	787	58	533	0
187	SOUTHERN METHODIST UNIV	1,910	559	48	507	77	20	13	554	132
188	MEHARRY MEDICAL COLLEGE	1,903E	0	0	0	0	1,903E	0	0	0
189	UNIV OF SOUTH CAROLINA	1,841	272	215	174	52	334	150	644	0
190	CUNY CITY COLLEGE	1,833E	214I	207I	151I	41I	965I	51I	138I	66I
	TOTAL 1ST 190 INSTS.	2,815,599	370,221	319,887	189,655	71,263	1,486,229	66,170	212,728	99,446
191	OLD DOMINION UNIVERSITY	1,829	660	738	0	26	230	85	90	0
192	ANTIOCH COLLEGE	1,809E	123I	479I	96I	33I	283I	153I	528I	114I
193	UNIV OF ILL CHICAGO CIR	1,775	612	299	38	225	394	161	46	0
194	MED COLL OHIO AT TOLEDO	1,740	0	0	0	0	1,740	0	0	0
195	WORCESTER POLY INSTITUTE	1,686	1,581	103	0	2	0	0	0	0
196	UNIVERSITY OF MONTANA	1,647E	0	216E	440E	11E	566E	88E	326E	0
197	NEW MEXICO HIGHLANDS UNIV	1,592	0	117	63	0	158	23	1,231	0
198	CUNY GRADUATE DIVISION	1,567	0	0	0	165	34	745	623	0
199	OHIO UNIVERSITY	1,497	718	497	0	29	85	50	118	0
200	UNIV ALABAMA HUNTSVILLE	1,487	919	365	50	25	40	40	48	0
	TOTAL 1ST 200 INSTS.	1,832,228	374,834	322,701	190,342	71,779	1,489,759	67,515	215,738	99,560
	ALL OTHER INSTITUTIONS	101,324	9,618	18,253	10,034	2,904	28,235	6,861	19,869	5,550

a/ CONFIDENTIAL

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-25. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	1,796,429	205,008	194,112	145,410	41,780	937,135	48,304	157,945	66,735
1 UNIV OF WISCONSIN-MADISON	84,201	3,941	10,142	11,468	3,216	31,284	4,356	13,063	6,731
2 UNIVERSITY OF MICHIGAN	69,229	17,444	3,159	3,261	1,602	26,455	4,531	12,777	0
3 U OF CAL SAN DIEGO	66,789	749	9,731	27,975	335	27,043	495	257	204
4 U OF CAL BERKELEY	56,692	10,645	9,545	692	1,558	23,804	2,137	7,144	1,167
5 UNIVERSITY OF MINNESOTA	53,447	4,774	3,907	932	882	33,946	1,023	5,032	2,951
6 UNIVERSITY OF WASHINGTON	53,424	4,216	4,132	8,064	354	34,940	584	984	150
7 U OF CAL LOS ANGELES	52,291	5,080	4,447	4,139	1,614	30,570	2,758	3,012	671
8 UNIV ILLINOIS URBANA	40,223	10,730	5,631	2,728	3,632	10,393	1,515	4,171	1,423
9 UNIVERSITY OF COLORADO	34,365	1,281	7,663	281	787	14,330	1,686	2,075	6,262
10 TEXAS A & M UNIVERSITY	33,618	8,775	3,460	4,267	41	15,995	21	535	524
TOTAL 1ST 10 INSTS.	544,279	67,635	61,817	63,807	14,021	248,760	19,106	49,050	20,083
11 U OF CAL DAVIS	33,247	2,662	1,085	180	111	27,271	80	1,858	0
12 MICHIGAN STATE UNIVERSITY	32,534	913	2,929	594	567	18,847	935	5,057	2,692
13 UNIV OF TEXAS AT AUSTIN	31,386	4,842	6,639	1,127	1,385	5,080	1,852	4,288	6,173
14 OHIO STATE UNIVERSITY	30,778	5,922	2,144	1,557	496	15,233	257	4,642	527
15 PENNSYLVANIA STATE UNIV	30,286E	4,529	3,269	4,144	128	10,191E	658E	4,798	2,569
16 U OF CAL SAN FRANCISCO	29,109	0	0	0	86	29,023	0	0	0
17 UNIVERSITY OF ARIZONA	27,764	1,680	7,537	3,621	147	11,302	1,001	2,476	0
18 PURDUE UNIV ALL CAMPUSES	27,315	6,775	3,142	288	957	13,216	638	1,971	328
19 UNIVERSITY OF FLORIDA	27,254	4,046	1,400	664	586	19,314	420	824	0
20 UNIVERSITY OF HAWAII	26,859	2,161	3,309	6,838	58	10,464	339	3,105	585
TOTAL 1ST 20 INSTS.	840,811	101,165	93,271	82,820	18,542	408,701	25,286	78,069	32,957
21 UNIVERSITY OF GEORGIA	26,310	737	2,525	0	737	15,549	921	5,841	0
22 N C STATE UNIV AT RALEIGH	24,856	3,453	307	780	688	16,620	119	945	1,944
23 UNIV OF NC AT CHAPEL HILL	24,644	2,087	1,007	72	285	14,187	288	384	6,334
24 UNIVERSITY OF UTAH	23,469	2,331	3,030	1,163	2,177	13,559	544	665	0
25 UNIV OF MISSOURI COLUMBIA	22,495	1,400	251	168	64	18,318	334	771	1,189
26 RUTGERS THE STATE UNIV	21,939	1,375	2,874	1,782	942	9,196	917	3,931	922
27 COLORADO STATE UNIVERSITY	20,451	4,503	511	2,620	302	9,048	651	1,588	1,228
28 UNIV OF MD COLLEGE PARK	20,365	3,152	6,692	2,234	1,962	4,991	313	830	191
29 OREGON STATE UNIVERSITY	20,241	1,052	809	5,443	200	11,849	0	888	0
30 UNIVERSITY OF KANSAS	17,925	1,814	1,171	1,284	370	9,010	2,305	1,971	0
TOTAL 1ST 30 INSTS.	1,063,506	123,069	112,448	98,366	26,269	531,028	31,678	95,883	44,765
31 LA ST U BATON ROUGE	16,568	1,003	1,969	2,008	321	10,524	357	386	0
32 UNIVERSITY OF ALASKA	16,560	447	4,984	5,247	2	4,150	0	1,730	0
33 IOWA ST U OF SCI & TECH	16,525	2,902	986	115	961	9,289	83	2,060	129
34 UNIVERSITY OF CONNECTICUT	16,381	1,748	574	930	740	10,076	668	1,645	0
35 WASHINGTON STATE UNIV	15,402	2,957	906	906	274	9,248	136	975	0
36 UNIVERSITY OF IOWA	15,386	637	3,527	31	326	9,901	234	730	0
37 UNIVERSITY OF PITTSBURGH	15,048	613	2,936	163	70	10,520	315	237	194
38 UNIV OF NEBRASKA - LNCLN	13,970	1,117	676	1,317	128	9,918	48	766	0
39 U OF CAL RIVERSIDE	13,960	1,514	1,409	1,780	245	8,544	81	387	0
40 OKLAHOMA STATE UNIVERSITY	13,416	2,132	344	98	0	7,031	147	49	3,615
TOTAL 1ST 40 INSTS.	1,216,722	138,139	130,759	110,961	29,336	620,229	33,747	104,848	48,703
41 VIRGINIA POLYTECHNIC INST	13,380	2,169	1,757	517	301	7,086	14	315	1,221
42 U OF TEX M D ANDERSON HOS	13,264	0	1,645	0	999	10,620	0	0	0
43 UNIV OF KENTUCKY ALL CAM	12,594	1,128	401	123	45	8,481	123	994	1,299
44 KANSAS ST UNIVERSITY	12,457	1,044	355	1,092	222	8,569	75	610	490
45 GEORGIA INSTITUTE OF TECH	12,263	7,625	2,568	254	560	258	57	808	133
				330	27	120	9,013	114	55	969

1 UNIV OF WISCONSIN-MADISON	84,201	3,941	10,142	11,468	3,216	31,284	4,356	13,063	6,731
2 UNIVERSITY OF MICHIGAN	69,229	17,444	3,159	3,261	1,602	26,455	4,531	12,777	0
3 U OF CAL SAN DIEGO	66,789	749	9,731	27,975	335	27,043	495	257	204
4 U OF CAL BERKELEY	56,692	10,645	9,545	692	1,558	23,804	2,137	7,144	1,167
5 UNIVERSITY OF MINNESOTA	53,447	4,774	3,907	932	882	33,946	1,023	5,032	2,951
6 UNIVERSITY OF WASHINGTON	53,424	4,216	4,132	8,064	354	34,940	584	984	150
7 U OF CAL LOS ANGELES	52,291	5,080	4,447	4,139	1,614	30,570	2,758	3,012	671
8 UNIV ILLINOIS URBANA	40,223	10,730	5,631	2,728	3,632	10,393	1,515	4,171	1,423
9 UNIVERSITY OF COLORADO	34,365	1,281	7,663	281	787	14,330	1,686	2,075	6,262
10 TEXAS A & M UNIVERSITY	33,618	8,775	3,460	4,267	41	15,995	21	535	524
TOTAL 1ST 10 INSTS.	544,279	67,635	61,817	63,807	14,021	248,760	19,106	49,050	20,083
11 U OF CAL DAVIS	33,247	2,662	1,085	180	111	27,271	80	1,858	0
12 MICHIGAN STATE UNIVERSITY	32,534	913	2,929	594	567	18,847	935	5,057	2,692
13 UNIV OF TEXAS AT AUSTIN	31,386	4,842	6,639	1,127	1,385	5,080	1,852	4,288	6,173
14 OHIO STATE UNIVERSITY	30,778	5,922	2,144	1,557	496	15,233	257	4,642	527
15 PENNSYLVANIA STATE UNIV	30,286E	4,529	3,269	4,144	128	10,191E	658E	4,798	2,569
16 U OF CAL SAN FRANCISCO	29,109	0	0	0	86	29,023	0	0	0
17 UNIVERSITY OF ARIZONA	27,764	1,680	7,537	3,621	147	11,302	1,001	2,476	0
18 PURDUE UNIV ALL CAMPUSES	27,315	6,775	3,142	288	957	13,216	638	1,971	328
19 UNIVERSITY OF FLORIDA	27,254	4,046	1,400	664	586	19,314	420	824	0
20 UNIVERSITY OF HAWAII	26,859	2,161	3,309	6,838	58	10,464	339	3,105	585
TOTAL 1ST 20 INSTS.	840,811	101,165	93,271	82,820	18,542	408,701	25,286	78,069	32,957
21 UNIVERSITY OF GEORGIA	26,310	737	2,525	0	737	15,549	921	5,841	0
22 N C STATE UNIV AT RALEIGH	24,856	3,453	307	780	688	16,620	119	945	1,944
23 UNIV OF NC AT CHAPEL HILL	24,644	2,087	1,007	72	285	14,187	288	384	6,334
24 UNIVERSITY OF UTAH	23,469	2,331	3,030	1,163	2,177	13,559	544	665	0
25 UNIV OF MISSOURI COLUMBIA	22,495	1,400	251	168	64	18,318	334	771	1,189
26 RUTGERS THE STATE UNIV	21,939	1,375	2,874	1,782	942	9,196	917	3,931	922
27 COLORADO STATE UNIVERSITY	20,451	4,503	511	2,620	302	9,048	651	1,588	1,228
28 UNIV OF MD COLLEGE PARK	20,365	3,152	6,692	2,234	1,962	4,991	313	830	191
29 OREGON STATE UNIVERSITY	20,241	1,052	809	5,443	200	11,849	0	888	0
30 UNIVERSITY OF KANSAS	17,925	1,814	1,171	1,284	370	9,010	2,305	1,971	0
TOTAL 1ST 30 INSTS.	1,063,506	123,069	112,448	98,366	26,269	531,028	31,678	95,883	44,765
31 LA ST U BATON ROUGE	16,568	1,003	1,969	2,008	321	10,524	357	386	0
32 UNIVERSITY OF ALASKA	16,560	447	4,984	5,247	2	4,150	0	1,730	0
33 IOWA ST U OF SCI & TECH	16,525	2,902	986	115	961	9,289	83	2,060	129
34 UNIVERSITY OF CONNECTICUT	16,381	1,748	574	930	740	10,076	668	1,645	0
35 WASHINGTON STATE UNIV	15,402	2,957	906	906	274	9,248	136	975	0
36 UNIVERSITY OF IOWA	15,386	637	3,527	31	326	9,901	234	730	0
37 UNIVERSITY OF PITTSBURGH	15,048	613	2,936	163	70	10,520	315	237	194
38 UNIV OF NEBRASKA - LNCLN	13,970	1,117	676	1,317	128	9,918	48	766	0
39 U OF CAL RIVERSIDE	13,960	1,514	1,409	1,780	245	8,544	81	387	0
40 OKLAHOMA STATE UNIVERSITY	13,416	2,132	344	98	0	7,031	147	49	3,615
TOTAL 1ST 40 INSTS.	1,216,722	138,139	130,759	110,961	29,336	620,229	33,747	104,848	48,703
41 VIRGINIA POLYTECHNIC INST	13,380	2,169	1,757	517	301	7,086	14	315	1,221
42 U OF TEX M D ANDERSON HOS	13,264	0	1,645	0	999	10,620	0	0	0
43 UNIV OF KENTUCKY ALL CAM	12,594	1,128	401	123	45	8,481	123	994	1,299
44 KANSAS ST UNIVERSITY	12,457	1,044	355	1,092	222	8,569	75	610	490
45 GEORGIA INSTITUTE OF TECH	12,263	7,625	2,568	254	560	258	57	808	133
46 UNIVERSITY OF CINCINNATI	12,142	1,505	329	37	120	9,013	114	55	969
47 CUNY MT SINAI SCH OF MED	11,785	0	0	0	0	11,785	0	0	0
48 UNIV ALABAMA BIRMINGHAM	11,588	0	42	0	0	11,510	12	24	0
49 FLORIDA STATE UNIVERSITY	11,324	25	3,959	1,358	756	1,231	1,072	2,923	0
50 MISSISSIPPI STATE UNIV	11,113	927	425	0	86	8,979	9	687	0
TOTAL 1ST 50 INSTS.	1,338,632	152,562	142,240	114,342	32,425	697,761	35,223	111,264	52,815

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-25. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIVERSITY OF VIRGINIA	11,027	3,006	1,653	497	320	4,867	189	122	373
52 SUNY BUFFALO	10,380	998	871	65	812	6,086	204	1,225	119
53 UTAH STATE UNIVERSITY	9,837	3,489	46	1,419	145	4,338	54	346	0
54 INDIANA UNIVERSITY-PURDUE	9,765	0	0	0	0	9,682	0	83	0
55 SUNY UPSTATE MEDICAL CTR	9,486	0	0	0	103	9,383	0	0	0
56 AUBURN UNIVERSITY	9,464	1,353	0	1,118	0	6,577	0	416	0
57 INDIANA UNIV-BLOOMINGTON	9,214	0	3,546	123	434	1,364	368	1,465	1,914
58 UNIV OF MASS AT AMHERST	9,180	1,393	2,013	1,772	248	2,108	603	1,043	0
59 UNIV OF RHODE ISLAND	8,855	1,581E	1,799E	0	474E	3,222E	455E	1,324E	0
60 UNIVERSITY OF IDAHO	8,572	586	297	282	0	5,470	2	571	1,364
TOTAL 1ST 60 INSTS.	1,434,412	164,968	152,465	119,618	34,961	750,858	37,098	117,859	56,585
61 SUNY STONY BROOK	8,540	1,012	2,068	1,128	794	1,812	547	383	796
62 UNIVERSITY OF ARKANSAS	7,638	486	283	933	4	5,153	13	734	32
63 UNIV OF VT & ST AGRIC COL	7,188	86	207	135	5	5,871	415	344	125
64 UNIVERSITY OF NEW MEXICO	7,093	2,419E	309E	306E	72E	2,762E	279E	136E	810E
65 U TENN MED UNITS MEMPHIS	7,081	0	0	0	0	7,081	0	0	0
66 WEST VIRGINIA UNIVERSITY	6,851	2,030	56	4	0	4,440	55	266	0
67 VIRGINIA COMMONWLTH UNIV	6,850	0	0	0	0	6,850	0	0	0
68 NEW MEXICO STATE UNIV	6,849	3,896	436	376	49	419	171	1,502	0
69 UNIV OF MD BALTIMORE	6,812	0	0	0	0	6,812	0	0	0
70 U OF CAL IRVINE	6,776	285	1,832	0	168	4,163	0	328	0
TOTAL 1ST 70 INSTS.	1,506,090	175,162	157,656	122,500	36,053	796,221	38,578	121,552	58,348
71 CLEMSON UNIVERSITY	6,744	556	93	294	46	4,941	0	374	440
72 UNIVERSITY OF OREGON	6,697	0	1,401	347	155	1,350	610	2,796	38
73 MONTANA STATE UNIVERSITY	6,692	1,209	495	381	6	4,414	0	187	0
74 UNIVERSITY OF WYOMING	6,678	544	1,568	1,402	2	2,683	137	287	55
75 U OF ILL MEDICAL CENTER	6,554	0	23	0	0	6,531	0	0	0
76 U TEX GALVESTON MED BRAN	6,534	0	0	0	0	6,534	0	0	0
77 UNIV OF MAINE ORONO	6,438	333	230	1,757	0	3,200	101	817	0
78 WAYNE STATE UNIVERSITY	6,386	961	868	11	60	3,207	165	512	602
79 UNIV OF MISSISSIPPI	6,278	268	160	33	0	5,303	110	404	0
80 U TEX HLTH SCI CTR DALLAS	6,258	0	0	0	0	6,258	0	0	0
TOTAL 1ST 80 INSTS.	1,571,349	179,053	162,494	126,725	36,322	840,642	39,701	126,929	59,483
81 U OF OREGON MED SCHOOL	6,036E	0	0	0	0	6,036E	0	0	0
82 UNIV OKLAHOMA	5,937E	607	282	417	377	3,249E	93	747	165
83 UNIVERSITY OF DELAWARE	5,760	1,438	927	1,392	51	1,320	238	394	0
84 SUNY DOWNSTATE MED CTR	5,568	0	0	0	0	5,568	0	0	0
85 SUNY ALBANY	5,263	0	561	1,403	180	1,147	88	1,677	207
86 NORTH DAKOTA STATE UNIV	5,263	29	56	343	0	4,835	0	0	0
87 INDIANA UNIV NORTHWEST	5,082	0	0	0	0	0	0	5,082	0
88 U OF CAL SANTA BARBARA	4,939	252	1,618	510	702	776	642	439	0
89 UNIV OF MO SYSTEM OFC	4,706	0	0	521	0	4,124	0	39	22
90 SOUTH DAKOTA STATE UNIV	4,472	365	14	33	0	3,348	0	270	442
TOTAL 1ST 90 INSTS.	1,624,375	181,744	165,952	131,344	37,632	871,045	40,762	135,577	60,319
91 U TENNESSEE KNOXVILLE	4,067	2,014	672	32	41	786	144	351	27
92 UNIV OF MISSOURI ROLLA	4,059	3,130	624	81	200	0	8	1	15
93 TEXAS TECH UNIVERSITY	4,037	1,438	584	57	86	1,470	14	215	173

		ENGINEERING	SCIENCES	MENTAL	MATICS	SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51	UNIVERSITY OF VIRGINIA	11,027	3,006	1,653	497	320	4,867	189	122	373
52	SUNY BUFFALO	10,380	998	871	65	812	6,086	204	1,225	119
53	UTAH STATE UNIVERSITY	9,837	3,489	46	1,419	145	4,338	54	346	0
54	INDIANA UNIVERSITY-PURDUE	9,765	0	0	0	0	9,682	0	83	0
55	SUNY UPSTATE MEDICAL CTR	9,486	0	0	0	103	9,383	0	0	0
56	AUBURN UNIVERSITY	9,464	1,353	0	1,118	0	6,577	0	416	0
57	INDIANA UNIV-BLOOMINGTON	9,214	0	3,546	123	434	1,364	368	1,465	1,914
58	UNIV OF MASS AT AMHERST	9,180	1,393	2,013	1,772	248	2,108	603	1,043	0
59	UNIV OF RHODE ISLAND	8,855	1,581E	1,799E	0	474E	3,222E	455E	1,324E	0
60	UNIVERSITY OF IDAHO	8,572	586	297	282	0	5,470	2	571	1,364
	TOTAL 1ST 60 INSTS.	1,434,412	164,968	152,465	119,618	34,961	750,858	37,098	117,859	56,585
61	SUNY STONY BROOK	8,540	1,012	2,068	1,128	794	1,812	547	383	796
62	UNIVERSITY OF ARKANSAS	7,638	486	283	933	4	5,153	13	734	32
63	UNIV OF VT & ST AGRIC COL	7,188	86	207	135	5	5,671	415	344	125
64	UNIVERSITY OF NEW MEXICO	7,093	2,419E	309E	306E	72E	2,762E	279E	136E	810E
65	U TENN MED UNITS MEMPHIS	7,081	0	0	0	0	7,081	0	0	0
66	WEST VIRGINIA UNIVERSITY	6,851	2,030	56	4	0	4,440	55	266	0
67	VIRGINIA COMMONWLTH UNIV	6,850	0	0	0	0	6,850	0	0	0
68	NEW MEXICO STATE UNIV	6,849	3,896	436	376	49	419	171	1,502	0
69	UNIV OF MD BALTIMORE	6,812	0	0	0	0	6,812	0	0	0
70	U OF CAL IRVINE	6,776	285	1,832	0	168	4,163	0	328	0
	TOTAL 1ST 70 INSTS.	1,506,090	175,182	157,656	122,500	36,053	796,221	38,578	121,552	58,348
71	CLEMSON UNIVERSITY	6,744	556	93	294	46	4,981	0	374	440
72	UNIVERSITY OF OREGON	6,697	0	1,401	347	155	1,350	610	2,796	38
73	MONTANA STATE UNIVERSITY	6,692	1,209	495	381	6	4,414	0	187	0
74	UNIVERSITY OF WYOMING	6,678	544	1,568	1,402	2	2,683	137	287	55
75	U OF ILL MEDICAL CENTER	6,554	0	23	0	0	6,531	0	0	0
76	U TEX GALVESTON MED BRAN	6,534	0	0	0	0	6,534	0	0	0
77	UNIV OF MAINE ORONO	6,438	333	230	1,757	0	3,200	101	817	0
78	WAYNE STATE UNIVERSITY	6,386	961	868	11	60	3,207	165	512	602
79	UNIV OF MISSISSIPPI	6,278	268	160	33	0	5,303	110	404	0
80	U TEX HLTH SCI CTR DALLAS	6,258	0	0	0	0	6,258	0	0	0
	TOTAL 1ST 80 INSTS.	1,571,349	179,053	162,494	126,725	36,322	840,642	39,701	126,929	59,483
81	U OF OREGON MED SCHOOL	6,036E	0	0	0	0	6,036E	0	0	0
82	UNIV OKLAHOMA	5,937E	607	282	417	377	3,249E	93	747	165
83	UNIVERSITY OF DELAWARE	5,760	1,438	927	1,392	51	1,320	238	394	0
84	SUNY DOWNSTATE MED CTR	5,568	0	0	0	0	5,568	0	0	0
85	SUNY ALBANY	5,263	0	561	1,403	180	1,147	88	1,677	207
86	NORTH DAKOTA STATE UNIV	5,263	29	56	343	0	4,835	0	0	0
87	INDIANA UNIV NORTHWEST	5,082	0	0	0	0	0	0	5,082	0
88	U OF CAL SANTA BARBARA	4,939	252	1,618	510	702	776	642	439	0
89	UNIV OF MO SYSTEM OFC	4,706	0	0	521	0	4,124	0	39	22
90	SOUTH DAKOTA STATE UNIV	4,472	365	14	33	0	3,348	0	270	442
	TOTAL 1ST 90 INSTS.	1,624,375	181,744	165,952	131,344	37,632	871,045	40,762	135,577	60,319
91	U TENNESSEE KNOXVILLE	4,067	2,014	672	32	41	786	144	351	27
92	UNIV OF MISSOURI ROLLA	4,059	3,130	624	81	200	0	8	1	15
93	TEXAS TECH UNIVERSITY	4,037	1,838	584	57	86	1,470	14	215	173
94	UNIV OF NEW HAMPSHIRE	3,856	823	834	213	31	1,645	172	138	0
95	U TEX HLTH SCI CR HOUSTON	3,812	0	0	0	0	3,812	0	0	0
96	U OF NEB MED C AT OMAHA	3,706E	0	0	0	0	3,706E	0	0	0
97	U OF WIS MILWAUKEE	3,665	805	479	987	122	195	90	395	592
98	S U N Y SYSTEM OFFICE	3,572	418I	413I	299I	81I	1,873I	101I	262I	125I
99	COL OF MED & DENT OF N J	3,457	0	0	0	0	3,457	0	0	0
100	U PUERTO RICO SAN JUAN	3,300E	0	0	0	0	3,300E	0	0	0
	TOTAL 1ST 100 INSTS.	1,661,906	190,372	169,558	133,013	38,193	891,289	41,291	136,939	61,251
	ALL OTHER INSTITUTIONS	134,523	14,636	24,554	12,397	3,587	45,846	7,013	21,006	5,484

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-26. CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PRIVATE UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	1,137,123	179,444	146,842	54,966	32,903	580,859	26,072	77,662	38,375
1 MASS INST OF TECHNOLOGY	125,413	73,535	21,084	4,827	8,681	10,105	1,340	4,983	858
2 HARVARD UNIVERSITY	58,480	665	8,501	4,391	601	33,295	903	9,697	427
3 CORNELL UNIVERSITY	57,853	6,485	9,742	334	909	35,537	203	4,011	232
4 COLUMBIA UNIV MAIN DIV	57,376	3,017	4,525	8,787	441	27,745	301	3,324	9,236
5 STANFORD UNIVERSITY	53,984	9,233	8,524	2,609	3,339	22,989	700	5,775	815
6 UNIVERSITY OF CHICAGO	51,711	0	9,070	1,667	1,095	34,427	576	4,876	0
7 JOHNS HOPKINS UNIVERSITY	42,268	968	2,232	3,136	160	33,895	413	1,074	390
8 UNIV OF PENNSYLVANIA	40,594	2,389	4,021	89	247	24,767	489	4,063	4,529
9 UNIVERSITY OF ROCHESTER	38,497	2,952	4,428	179	265	26,016	2,123	1,008	1,526
10 NEW YORK UNIVERSITY	37,219	2,384	2,296	953	2,988	24,994	861	2,550	193
TOTAL 1ST 10 INSTS.	562,995	101,628	74,423	26,972	18,726	273,770	7,909	41,361	18,206
11 YALE UNIVERSITY	34,200	1,438	4,741	960	440	23,469	1,138	2,014	0
12 UNIVERSITY OF MIAMI	26,769	1,445	999	4,316	38	18,481	200	1,188	102
13 WASHINGTON UNIV ST LOUIS	25,286	3,489	1,281	6	109	16,808	174	369	3,050
14 UNIV OF STHRN CALIFORNIA	25,155	6,423	797	1,524	130	13,758	482	2,041	0
15 YESHIVA UNIVERSITY	24,916	0	1,174	0	392	22,302	1,048	0	0
16 ROCKEFELLER UNIVERSITY	24,103	0	1,333	0	485	19,895	2,390	0	0
17 DUKE UNIVERSITY	22,261	683	2,141	0	225	17,357	542	417	896
18 PRINCETON UNIVERSITY	18,696	4,867	6,546	1,064	992	2,050	943	2,234	0
19 CALIFORNIA INST OF TECH	18,653	4,494	7,185	3,120	223	3,106	0	302	223
20 CASE WESTERN RESERVE UNIV	17,963	4,796	2,146	305	166	9,826	107	617	0
TOTAL 1ST 20 INSTS.	800,997	129,263	102,766	38,267	21,926	420,822	14,933	50,543	22,477
21 NORTHWESTERN UNIVERSITY	16,261	1,786	2,258	176	343	8,186	336	681	2,495
22 BAYLOR COLLEGE OF MED	15,134	0	0	0	0	15,134	0	0	0
23 CARNEGIE-MELLON UNIV	14,850	3,857	6,450	0	2,047	445	477	1,058	516
24 WOODS HOLE OCEANOGRAPHIC INST	14,342	2,901	0	10,037	0	1,404	0	0	0
25 VANDERBILT UNIVERSITY	13,683	375	780	24	49	11,759	238	458	0
26 TULANE UNIVERSITY	12,392	633	150	8	308	10,756	202	167	168
27 GEORGE WASHINGTON UNIV	12,150	1,831	71	178	625	6,808	318	2,037	282
28 SYRACUSE UNIVERSITY	11,988	3,931E	2,405E	0	716	1,033	219	1,429	2,255
29 TEMPLE UNIVERSITY	11,732	59	418	3	60	8,891	333	1,787	181
30 BOSTON UNIVERSITY	9,237	86	345	0	0	8,067	13	86	640
TOTAL 1ST 30 INSTS.	932,766	144,722	115,643	48,693	26,074	493,305	17,069	58,246	29,014
31 BROWN UNIVERSITY	9,075	2,014	1,571	546	1,253	2,418	391	461	421
32 EMORY UNIVERSITY	8,232	0	260	0	10	7,785	83	20	74E
33 GEORGETOWN UNIVERSITY	7,771	0	788	0	194	5,002	193	157	1,437
34 TUFTS UNIVERSITY	7,436	257	401	0	10	6,216	28	464	60
35 UNIVERSITY OF DENVER	6,611	2,570	1,240	36	203	240	404	1,834	84
36 BRANDEIS UNIVERSITY	6,601	0	1,264	0	174	2,422	48	2,014	679
37 ALBANY MED COL OF UNION U	6,598	0	0	0	0	6,598	0	0	0
38 UNIVERSITY OF DAYTON	6,395	3,999	1,433	31	515	376	0	4	37
39 RICE UNIVERSITY	5,927	1,598	2,747	321	350	452	10	449	0
40 ST LOUIS UNIV	5,548	302	90	285	0	4,549	16	33	273
TOTAL 1ST 40 INSTS.	1,002,960	155,462	125,437	49,912	28,783	529,363	18,242	63,682	32,079
41 RENSSELAER POLY INST	5,382E	3,409E	1,283E	186E	250E	212E	17E	0	25E
42 THE MED COLL OF WISCONSIN	5,066	0	0	0	0	5,066	0	0	0
43 DARTMOUTH COLLEGE	4,918	491	347	268	172	3,189	219	64	168
44 THOM JEFFERSON UNIV HOSP	4,847	0	0	0	0	4,847	0	0	0
45 LEHIGH UNIVERSITY	4,654	2,687	602	369	523	85	27	12	349
46 NEW YORK MEDICAL COLLEGE	4,615	0	0	0	0	4,615	0	0	0

1 CALIF INST OF TECHNOLOGY	125,493	75,535	21,084	4,827	8,681	10,105	1,340	4,983	858
2 HARVARD UNIVERSITY	58,480	665	8,501	4,391	601	33,295	903	9,697	427
3 CORNELL UNIVERSITY	57,453	6,485	9,742	334	909	35,537	203	4,011	232
4 COLUMBIA UNIV MAIN DIV	57,376	3,017	4,525	8,787	441	27,745	301	3,324	9,236
5 STANFORD UNIVERSITY	53,984	9,233	8,524	2,609	3,339	22,989	700	5,775	815
6 UNIVERSITY OF CHICAGO	51,711	0	9,070	1,667	1,095	34,427	576	4,876	0
7 JOHNS HOPKINS UNIVERSITY	42,268	968	2,232	3,136	160	33,895	413	1,074	390
8 UNIV OF PENNSILVANIA	40,594	2,389	4,021	89	247	24,767	489	4,063	4,529
9 UNIVERSITY OF ROCHESTER	38,497	2,952	4,428	179	265	26,016	2,123	1,008	1,526
10 NEW YORK UNIVERSITY	37,219	2,384	2,296	953	2,988	24,994	861	2,550	193
TOTAL 1ST 10 INSTS.	562,995	101,628	74,423	26,972	18,726	273,770	7,909	41,361	18,206
11 YALE UNIVERSITY	34,200	1,438	4,741	960	440	23,469	1,138	2,014	0
12 UNIVERSITY OF MIAMI	26,769	1,445	999	4,316	38	18,481	200	1,188	102
13 WASHINGTON UNIV ST LOUIS	25,286	3,489	1,281	6	109	16,808	174	369	3,050
14 UNIV OF SOUTH CALIFORNIA	25,155	6,423	797	1,524	130	13,758	482	2,041	0
15 YESHIVA UNIVERSITY	24,916	0	1,174	0	392	22,302	1,048	0	0
16 ROCKEFELLER UNIVERSITY	24,103	0	1,333	0	485	19,895	2,390	0	0
17 DUKE UNIVERSITY	22,261	683	2,141	0	225	17,357	542	417	896
18 PRINCETON UNIVERSITY	18,696	4,867	6,546	1,064	992	2,050	943	2,234	0
19 CALIFORNIA INST OF TECH	18,653	4,494	7,185	3,120	223	3,106	0	302	223
20 CASE WESTERN RESERVE UNIV	17,963	4,796	2,146	305	166	9,826	107	617	0
TOTAL 1ST 20 INSTS.	800,997	129,263	102,766	38,267	21,926	420,822	14,933	50,543	22,477
21 NORTHWESTERN UNIVERSITY	16,261	1,786	2,258	176	343	8,186	336	681	2,495
22 BAYLOR COLLEGE OF MED	15,134	0	0	0	0	15,134	0	0	0
23 CARNEGIE-MELLON UNIV	14,850	3,857	6,450	0	2,047	445	477	1,058	516
24 WOODS HOLE OCNGRPHIC INST	14,342	2,901	0	10,037	0	1,404	0	0	0
25 VANDERBILT UNIVERSITY	13,683	375	780	24	49	11,759	238	458	0
26 TULANE UNIVERSITY	12,392	633	150	8	308	10,756	202	167	168
27 GEORGE WASHINGTON UNIV	12,150	1,831	71	178	625	6,808	318	2,037	282
28 SYRACUSE UNIVERSITY	11,988	3,931E	2,405E	0	716	1,033	219	1,429	2,255
29 TEMPLE UNIVERSITY	11,732	59	418	3	60	8,891	333	1,787	181
30 BOSTON UNIVERSITY	9,237	86	345	0	0	8,067	13	86	640
TOTAL 1ST 30 INSTS.	932,766	144,722	115,643	48,693	26,074	493,305	17,069	58,246	29,014
31 BROWN UNIVERSITY	9,075	2,014	1,571	546	1,253	2,418	391	461	421
32 EMORY UNIVERSITY	8,232	0	260	0	10	7,785	83	30	74E
33 GEORGETOWN UNIVERSITY	7,771	0	788	0	194	5,002	193	157	1,437
34 TUFTS UNIVERSITY	7,436	257	401	0	10	6,216	28	464	60
35 UNIVERSITY OF DENVER	6,611	2,570	1,240	36	203	240	404	1,834	84
36 BRANDEIS UNIVERSITY	6,601	0	1,264	0	174	2,422	48	2,014	679
37 ALBANY MED COL OF UNION U	6,598	0	0	0	0	6,598	0	0	0
38 UNIVERSITY OF DAYTON	6,395	3,999	1,433	31	515	376	0	4	37
39 RICE UNIVERSITY	5,927	1,598	2,747	321	350	452	10	449	0
40 ST LOUIS UNIV	5,548	302	90	285	0	4,549	16	33	273
TOTAL 1ST 40 INSTS.	1,002,960	155,462	125,437	49,912	28,783	529,363	18,242	63,682	32,079
41 RENSSELAER POLY INST	5,382E	3,409E	1,283E	186E	250E	212E	17E	0	25E
42 THE MED COLL OF WISCONSIN	5,066	0	0	0	0	5,066	0	0	0
43 DARTMOUTH COLLEGE	4,918	491	347	268	172	3,189	219	64	168
44 THOM JEFFERSON UNIV HOSP	4,847	0	0	0	0	4,847	0	0	0
45 LEHIGH UNIVERSITY	4,654	2,687	602	369	523	85	27	12	349
46 NEW YORK MEDICAL COLLEGE	4,615	0	0	0	0	4,615	0	0	0
47 UNIVERSITY OF NOTRE DAME	4,527	880	2,342	0	128	1,042	38	97	0
48 RUSH MEDICAL COLLEGE	4,485	0	0	0	0	4,076	85	0	324
49 BOSTON COLLEGE	4,182E	0	646E	351E	1,002E	167E	6E	1,366E	646E
50 WAKE FOREST UNIVERSITY	3,701E	0	55	0	14	3,320E	49	202E	61
TOTAL 1ST 50 INSTS.	1,049,337	162,929	130,712	51,086	30,872	555,982	18,681	65,423	33,652

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-26. CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN PRIVATE UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 HOWARD UNIVERSITY	3,680E	120E	290E	0	0	2,364E	41E	810E	55E
52 STEVENS INSTITUTE OF TECH	3,498	2,326	912	0	0	0	260	0	0
53 GEO PEABODY COL TEACHERS	3,378	0	0	0	11	0	2,479	0	888
54 POLYTECHNIC INST OF N Y	3,239	2,648	461	0	50	0	0	0	80
55 HAHNEMANN MEDICAL COLLEGE	3,111	0	0	0	0	3,111	0	0	0
56 a/	2,836C	1,032	815	29	201	243	160	281	75
57 ILLINOIS INST OF TECH	2,834	933	584	96	200	300	158	156	407
58 BRIGHAM YOUNG UNIVERSITY	2,698E	451E	634E	22E	145E	953E	56E	437E	0
59 CATHOLIC UNIV OF AMERICA	2,488	1,404	725	0	20	30	171	138	0
60 DREXEL UNIVERSITY	2,358E	377I	300I	115I	67I	1,214I	51I	155I	79I
TOTAL 1ST 60 INSTS.	1,079,457	172,220	135,433	51,348	31,566	564,197	22,057	67,400	35,236
61 AMERICAN UNIVERSITY THE	2,143	0	295	0	0	178	141	1,529	0
62 ADELPHI UNIV	2,134	0	85	59	38	752	293	560	347
63 INSTITUTE PAPER CHEMISTRY	1,970	440	1,123	382	25	0	0	0	0
64 SOUTHERN METHODIST UNIV	1,910	559	48	507	77	20	13	554	132
65 HENNEMAN MEDICAL COLLEGE	1,903E	0	0	0	0	1,903E	0	0	0
66 ANTIOCH COLLEGE	1,809E	123I	479I	96I	33I	283I	153I	528I	114I
67 WORCESTER POLY INSTITUTE	1,686	1,581	103	0	2	0	0	0	0
68 TUSKEGEE INSTITUTE	1,479E	97I	396I	79I	26I	232I	128I	435I	86I
69 LOYOLA UNIVERSITY	1,436	0	30	0	1	1,303	18	84	0
70 THE MED COLL OF PENNA	1,313	0	0	0	0	1,313	0	0	0
TOTAL 1ST 70 INSTS.	1,097,240	175,020	137,992	52,471	31,768	570,181	22,803	71,090	35,915
71 TEXAS CHRISTIAN UNIV	1,308	0	238	3	0	12	796	91	168
72 TRINITY UNIVERSITY	1,217	61	96	51	26	163	34	745	41
73 FORDHAM UNIVERSITY	1,174	0	253	0	11	49	135	572	154
74 WESLEYAN UNIVERSITY	1,173	0	392	42	71	459	16	112	81
75 WENTWORTH INSTITUTE	1,142	97	0	1,045	0	0	0	0	0
76 NOVA UNIVERSITY	1,126	910	0	0	0	35	0	181	0
77 CLARKSON COL OF TECH	1,095	535	484	0	56	0	0	20	0
78 GALLAUDET COLLEGE	1,052	0	315	0	0	0	180	557	0
79 LOMA LINDA UNIVERSITY	1,044	0	0	0	19	1,025	0	0	0
80 UNIVERSITY OF SANTA CLARA	935	382	147	0	69	18	34	82	203
TOTAL 1ST 80 INSTS.	1,108,506	177,005	139,917	53,612	32,020	571,942	23,998	73,450	36,562
81 UNIVERSITY OF THE PACIFIC	924E	0	104E	27E	39E	536E	3E	0	215E
82 SETON HALL UNIVERSITY	895	0	300	0	60	160	25	350	0
83 MARQUETTE UNIVERSITY	839	183	79	50	0	424	0	103	0
84 FAIRLEIGH DICKINSON UNIV	804	106	101	11	2	584	0	0	0
85 U HLTH SCI/CHCGO MED SCH	798	0	0	0	0	798	0	0	0
86 NEW ENGLAND INSTITUTE	778	0	163	0	58	561	0	0	0
87 AMHERST COLLEGE	744	0	334	15	0	354	38	3	0
88 UNIV OF SAN FRANCISCO	688E	55I	169I	32I	16I	105I	54I	190I	67I
89 ROCHESTER INST TECHNOLOGY	675	0	78	0	0	0	0	0	597
90 NEW SCH FOR SOC RESEARCH	646E	0	0	80E	0	0	94E	472E	0
TOTAL 1ST 90 INSTS.	1,116,297	177,349	141,245	53,827	32,191	575,464	24,212	74,568	37,441
91 FAIRFIELD UNIVERSITY	560	0	201	0	116	14	74	155	0
92 CLARK UNIVERSITY	559	0	129E	103E	9E	110E	184E	24E	0
93 FLORIDA INST OF TECH	556	34	1	183	0	338	0	0	0
[illegible]	545	0	0	0	0	545	0	0	0

51 HOWARD UNIVERSITY	3,680E	120E	290E	0	0	2,364E	41E	81OE	55E
52 STEVENS INSTITUTE OF TECH	3,498	2,326	912	0	0	0	260	0	0
53 GEO PEABODY COL TEACHERS	3,378	0	0	0	11	0	2,479	0	888
54 POLYTECHNIC INST OF N Y	3,239	2,648	461	0	50	0	0	0	80
55 HAHNEMANN MEDICAL COLLEGE	3,111	0	0	0	0	3,111	0	0	0
56 a/	2,836C	1,032	815	29	201	243	160	281	75
57 ILLINOIS INST OF TECH	2,834	933	584	96	200	300	158	156	407
58 BRIGHAM YOUNG UNIVERSITY	2,698E	451E	634E	22E	145E	953E	56E	437E	0
59 CATHOLIC UNIV OF AMERICA	2,488	1,404	725	0	20	30	171	138	0
60 DREXEL UNIVERSITY	2,356E	377I	300I	115I	67I	1,219I	51I	155I	79I
TOTAL 1ST 60 INSTS.	1,079,457	172,220	135,433	51,348	31,566	564,197	22,057	67,400	35,236
61 AMERICAN UNIVERSITY THE	2,183	0	295	0	0'	178	141	1,529	0
62 ADELPHI UNIV	2,134	0	85	59	38	752	293	560	347
63 INSTITUTE PAPER CHEMISTRY	1,970	440	1,123	382	25	0	0	0	0
64 SOUTHERN METHODIST UNIV	1,910	559	48	507	77	20	13	554	132
65 HOWARD MEDICAL COLLEGE	1,903E	0	0	0	0	1,903E	0	0	0
66 ANTIOCH COLLEGE	1,809E	123I	479I	96I	33I	283I	153I	528I	114I
67 WORCESTER POLY INSTITUTE	1,686	1,581	103	0	2	0	0	0	0
68 TUSKEGEE INSTITUTE	1,479E	97I	396I	79I	26I	232I	128I	435I	86I
69 LOYOLA UNIVERSITY	1,436	0	30	0	1	1,303	18	84	0
70 THE MED COLL OF PENNA	1,313	0	0	0	0	1,313	0	0	0
TOTAL 1ST 70 INSTS.	1,097,240	175,020	137,992	52,471	31,760	570,181	22,803	71,090	35,915
71 TEXAS CHRISTIAN UNIV	1,308	0	238	3	0	12	796	91	168
72 TRINITY UNIVERSITY	1,217	61	96	51	26	163	34	745	41
73 FORDHAM UNIVERSITY	1,174	0	253	0	11	49	135	572	154
74 WESLEYAN UNIVERSITY	1,173	0	392	42	71	459	16	112	81
75 WENTWORTH INSTITUTE	1,142	97	0	1,045	0	0	0	0	0
76 NOVA UNIVERSITY	1,126	918	0	0	0	35	0	181	0
77 CLARKSON COL OF TECH	1,095	535	484	0	56	0	0	20	0
78 GALLAUDET COLLEGE	1,052	0	315	0	0	0	180	557	0
79 LOMA LINDA UNIVERSITY	1,044	0	0	0	19	1,025	0	0	0
80 UNIVERSITY OF SANTA CLARA	935	382	147	0	69	18	34	82	203
TOTAL 1ST 80 INSTS.	1,108,506	179,005	139,917	53,612	32,020	571,942	23,998	73,450	36,562
81 UNIVERSITY OF THE PACIFIC	924E	0	104E	27E	39E	536E	3E	0	215E
82 SETON HALL UNIVERSITY	895	0	300	0	60	160	25	350	0
83 MARQUETTE UNIVERSITY	839	183	79	58	0	424	0	103	0
84 FAIRLEIGH DICKINSON UNIV	804	106	101	11	2	584	0	0	0
85 U HLTH SCI/CHCGO MED SCH	798	0	0	0	0	798	0	0	0
86 NEW ENGLAND INSTITUTE	778	0	163	0	54	561	0	0	0
87 AMHERST COLLEGE	744	0	334	15	0	354	38	3	0
88 UNIV OF SAN FRANCISCO	688E	55I	169I	32I	16I	105I	54I	190I	67I
89 ROCHESTER INST TECHNOLOGY	675	0	78	0	0	0	0	0	597
90 NEW SCH FOR SOC RESEARCH	646E	0	0	80E	0	0	94E	472E	0
TOTAL 1ST 90 INSTS.	1,116,297	177,349	141,245	53,827	32,191	575,464	24,212	74,568	37,441
91 FAIRFIELD UNIVERSITY	560	0	201	0	116	14	74	155	0
92 CLARK UNIVERSITY	559	0	129E	103E	9E	110E	184E	24E	0
93 FLORIDA INST OF TECH	556	34	1	183	0	338	0	0	0
94 CREIGHTON UNIVERSITY	545	0	0	0	0	545	0	0	0
95 LONG ISLAND UNIVERSITY	485E	38I	121I	24I	11I	73I	39I	136I	43I
96 BRYN MAWR COLLEGE	483	0	42	2	0	158	105	176	0
97 INST TEXTILE TECHNOLOGY	450	290	20	60	80	0	0	0	0
98 HAVERFORD COLLEGE	441	0	54	0	3	336	0	39	9
99 DUQUESNE UNIVERSITY	426	0	95	0	10	267	0	18	36
100 BAYLOR UNIVERSITY	422	0	295	28	0	0	17	0	82
TOTAL 1ST 100 INSTS.	1,121,224	177,711	142,203	54,227	32,420	577,305	24,631	75,116	37,611
ALL OTHER INSTITUTIONS	15,899	1,733	4,639	739	483	3,554	1,441	2,546	764

a/ CONFIDENTIAL

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-27.

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	2,044,358	288,310	280,904	149,296	56,308	1,012,830	58,589	135,781	62,340
1 MASS INST OF TECHNOLOGY	112,652	68,674	19,204	4,326	7,988	8,900	860	2,453	247
2 U OF CAL SAN DIEGO	60,945	721	9,553	27,174	335	22,224	491	244	203
3 STANFORD UNIVERSITY	50,751	9,047	8,272	2,589	3,315	21,033	631	5,175	689
4 HARVARD UNIVERSITY	47,765	630	8,089	4,280	491	29,040	558	4,593	84
5 UNIVERSITY OF WASHINGTON	47,305	3,770	4,022	7,705	305	30,712	428	363	0
6 COLUMBIA UNIV MAIN DIV	46,362	1,690	4,281	8,618	418	21,248	260	2,481	7,366
7 UNIV OF WISCONSIN-MADISON	45,783	1,554	5,921	5,610	1,679	16,888	3,207	8,326	2,598
8 UNIVERSITY OF MICHIGAN	45,021	12,338	2,836	1,764	866	17,684	2,485	7,048	0
9 U OF CAL LOS ANGELES	44,011	4,509	4,257	3,689	1,049	26,072	2,675	1,312	448
10 U OF CAL BERKELEY	42,716	8,320	8,629	525	1,289	17,420	1,451	4,502	580
TOTAL 1ST 10 INSTS.	543,311	111,253	75,068	66,280	17,735	211,221	13,046	36,497	12,215
11 UNIVERSITY OF CHICAGO	37,930	0	8,321	1,620	1,064	23,639	572	2,714	0
12 JOHNS HOPKINS UNIVERSITY	35,416	863	2,181	1,286	160	30,004	290	536	96
13 CORNELL UNIVERSITY	32,273	5,299	8,425	272	849	15,625	154	1,588	61
14 UNIV OF PENNSYLVANIA	31,388	2,028	3,954	67	247	18,379	489	2,290	3,934
15 UNIVERSITY OF MINNESOTA	30,800	2,960	3,765	454	635	18,545	822	2,391	1,228
16 UNIVERSITY OF ROCHESTER	30,135	1,216	3,756	158	234	21,210	1,779	536	1,246
17 YALE UNIVERSITY	29,697	1,383	4,503	848	420	20,056	1,020	1,467	0
18 UNIV ILLINOIS URBANA	27,404	8,681	4,829	2,156	3,050	4,679	1,212	1,425	1,372
19 NEW YORK UNIVERSITY	27,081	2,188	2,193	679	2,911	16,858	834	1,399	19
20 UNIVERSITY OF COLORADO	26,774	1,062	6,911	216	538	11,042	1,549	1,451	4,005
TOTAL 1ST 20 INSTS.	852,209	136,933	123,902	74,036	27,843	391,258	21,767	52,294	24,176
21 U OF CAL SAN FRANCISCO	24,042	0	0	0	86	23,956	0	0	0
22 WASHINGTON UNIV ST LOUIS	22,666	3,112	1,240	6	109	14,909	148	300	2,842
23 UNIV OF SOUTH CALIFORNIA	21,855	6,154	759	1,348	130	11,364	482	1,618	0
24 YESHIVA UNIVERSITY	21,571	0	1,174	0	392	18,957	1,048	0	0
25 MICHIGAN STATE UNIVERSITY	20,554	702	2,678	282	480	10,833	799	3,080	1,700
26 UNIV OF NC AT CHAPEL HILL	19,930	1,056	955	35	285	12,156	254	178	5,011
27 OHIO STATE UNIVERSITY	19,693	3,839	2,078	857	492	7,584	252	4,064	527
28 DUKE UNIVERSITY	19,296	606	2,050	0	225	15,544	534	318	19
29 UNIVERSITY OF UTAH	18,460	1,459	2,507	625	770	12,175	497	427	0
30 UNIVERSITY OF MIAMI	18,237	983	680	2,945	25	12,587	136	812	69
TOTAL 1ST 30 INSTS.	1,058,513	154,844	138,023	80,134	30,837	531,323	25,917	63,091	34,344
31 U OF CAL DAVIS	17,712	924	846	124	103	14,781	73	861	0
32 UNIV OF TEXAS AT AUSTIN	17,391	2,339	3,871	169	444	3,443	1,482	1,667	3,976
33 PENNSYLVANIA STATE UNIV	17,201E	2,463	2,602	2,205	117	6,471E	458E	1,809	1,076
34 PURDUE UNIV ALL CAMPUSES	16,692	4,877	2,857	265	768	6,232	557	1,038	98
35 CALIFORNIA INST OF TECH	16,603	3,532	6,746	2,813	219	2,843	0	299	151
36 UNIVERSITY OF HAWAII	16,136	1,690	2,539	4,311	43	5,938	75	1,057	483
37 COLORADO STATE UNIVERSITY	15,415	3,853	415	2,584	204	5,964	628	949	818
38 CASE WESTERN RESERVE UNIV	15,154	4,110	1,979	238	166	8,169	103	389	0
39 TEXAS A & M UNIVERSITY	15,021	4,352	1,964	2,983	41	5,135	0	273	273
40 UNIVERSITY OF ARIZONA	14,409	864	5,296	1,210	74	5,220	831	914	0
TOTAL 1ST 40 INSTS.	1,220,247	183,848	167,138	97,036	33,016	595,519	30,124	72,347	41,219
41 UNIVERSITY OF KANSAS	14,141	1,428	969	51	329	8,253	2,261	850	0
42 UNIVERSITY OF IOWA	13,853	627	3,423	31	326	8,796	161	489	0
43 PRINCETON UNIVERSITY	13,742	3,642	5,472	845	664	1,427	775	917	0
44 WOODS HOLE OCEANOGRAPHIC INST	13,370	2,867	0	9,232	0	1,271	0	0	0
45 BAYLOR COLLEGE OF MED	13,235	0	0	0	0	13,235	0	0	0

1	MASS INST OF TECHNOLOGY	112,652	68,674	19,204	4,326	7,988	8,900	860	2,453	247
2	U OF CAL SAN DIEGO	60,945	721	9,553	27,174	335	22,224	491	244	203
3	STANFORD UNIVERSITY	50,751	9,047	8,272	2,589	3,315	21,033	631	5,175	689
4	HARVARD UNIVERSITY	47,765	630	8,089	4,280	491	29,040	558	4,593	84
5	UNIVERSITY OF WASHINGTON	47,305	3,770	4,022	7,705	305	30,712	428	363	0
6	COLUMBIA UNIV MAIN DIV	46,362	1,690	4,281	8,618	418	21,248	260	2,481	7,366
7	UNIV OF WISCONSIN-MADISON	45,783	1,554	5,921	5,610	1,679	16,888	3,207	8,326	2,598
8	UNIVERSITY OF MICHIGAN	45,021	12,338	2,836	1,764	866	17,684	2,485	7,048	0
9	U OF CAL LOS ANGELES	44,011	4,509	4,257	3,689	1,049	26,072	2,675	1,312	448
10	U OF CAL BERKELEY	42,716	8,320	8,629	525	1,289	17,420	1,451	4,502	580
	TOTAL 1ST 10 INSTS.	543,311	111,253	75,064	66,280	17,735	211,221	13,046	36,497	12,215
11	UNIVERSITY OF CHICAGO	37,930	0	8,321	1,620	1,064	23,639	572	2,714	0
12	JOHNS HOPKINS UNIVERSITY	35,416	863	2,181	1,286	160	30,004	290	536	96
13	CORNELL UNIVERSITY	32,273	5,299	8,425	272	849	15,625	154	1,588	61
14	UNIV OF PENNSYLVANIA	31,388	2,028	3,954	67	247	18,379	489	2,290	3,934
15	UNIVERSITY OF MINNESOTA	30,600	2,960	3,765	454	635	18,545	822	2,391	1,228
16	UNIVERSITY OF ROCHESTER	30,135	1,216	3,756	158	234	21,210	1,779	536	1,246
17	YALE UNIVERSITY	29,697	1,383	4,503	848	420	20,056	1,020	1,467	0
18	UNIV ILLINOIS URBANA	27,404	8,681	4,829	2,156	3,050	4,679	1,212	1,425	1,372
19	NEW YORK UNIVERSITY	27,081	2,188	2,193	679	2,911	16,858	834	1,399	19
20	UNIVERSITY OF COLORADO	26,774	1,062	6,911	216	538	11,042	1,549	1,451	4,005
	TOTAL 1ST 20 INSTS.	852,209	136,933	123,902	74,036	27,843	391,258	21,767	52,294	24,176
21	U OF CAL SAN FRANCISCO	24,042	0	0	0	86	23,956	0	0	0
22	WASHINGTON UNIV ST LOUIS	22,666	3,112	1,240	6	109	14,909	148	300	2,842
23	UNIV OF STHRN CALIFORNIA	21,855	6,154	759	1,348	130	11,364	482	1,618	0
24	YESHIVA UNIVERSITY	21,571	0	1,174	0	392	18,957	1,048	0	0
25	MICHIGAN STATE UNIVERSITY	20,554	702	2,678	282	480	10,833	799	3,080	1,700
26	UNIV OF NC AT CHAPEL HILL	19,930	1,056	955	35	285	12,156	254	178	5,011
27	OHIO STATE UNIVERSITY	19,693	3,839	2,078	857	492	7,584	252	4,064	527
28	DUKE UNIVERSITY	19,296	606	2,050	0	225	15,544	534	318	19
29	UNIVERSITY OF UTAH	18,460	1,459	2,507	625	770	12,175	497	427	0
30	UNIVERSITY OF MIAMI	18,237	983	680	2,945	25	12,587	136	812	69
	TOTAL 1ST 30 INSTS.	1,058,513	154,844	138,023	80,134	30,837	531,323	25,917	63,091	34,344
31	U OF CAL DAVIS	17,712	924	846	124	103	14,781	73	861	0
32	UNIV OF TEXAS AT AUSTIN	17,391	2,339	3,871	169	444	3,443	1,482	1,667	3,976
33	PENNSYLVANIA STATE UNIV	17,201E	2,463	2,602	2,205	117	6,471E	458E	1,809	1,076
34	PURDUE UNIV ALL CAMPUSES	16,692	4,877	2,857	265	768	6,232	557	1,038	98
35	CALIFORNIA INST OF TECH	16,603	3,532	6,746	2,813	219	2,843	0	299	151
36	UNIVERSITY OF HAWAII	16,136	1,690	2,539	4,311	43	5,938	75	1,057	483
37	COLORADO STATE UNIVERSITY	15,415	3,853	415	2,584	204	5,964	628	949	818
38	CASE WESTERN RESERVE UNIV	15,154	4,110	1,979	238	166	8,169	103	389	0
39	TEXAS A & M UNIVERSITY	15,021	4,352	1,964	2,983	41	5,135	0	273	273
40	UNIVERSITY OF ARIZONA	14,409	864	5,296	1,210	74	5,220	831	914	0
	TOTAL 1ST 40 INSTS.	1,220,247	183,848	167,138	97,036	33,016	595,519	30,124	72,347	41,219
41	UNIVERSITY OF KANSAS	14,141	1,428	969	51	329	8,253	2,261	850	0
42	UNIVERSITY OF IOWA	13,853	627	3,423	31	326	8,796	161	489	0
43	PRINCETON UNIVERSITY	13,742	3,642	5,472	845	664	1,427	775	917	0
44	WOODS HOLE OCNGRPHIC INST	13,370	2,867	0	9,232	0	1,271	0	0	0
45	BAYLOR COLLEGE OF MED	13,235	0	0	0	0	13,235	0	0	0
46	UNIVERSITY OF PITTSBURGH	13,074	460	2,828	152	69	8,990	221	189	165
47	NORTHWESTERN UNIVERSITY	12,809	1,542	2,015	161	334	5,774	261	448	2,274
48	UNIV OF MD COLLEGE PARK	12,635	2,075	6,352	785	796	1,828	292	384	123
49	UNIVERSITY OF ALASKA	11,822	64	4,398	4,477	2	2,751	0	130	0
50	VANDERBILT UNIVERSITY	11,780	229	676	12	41	10,336	222	264	0
	TOTAL 1ST 50 INSTS.	1,350,708	196,782	193,271	112,782	35,577	658,180	34,317	76,018	43,781

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-27.
CONTINUED

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES
IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER
OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 OREGON STATE UNIVERSITY	11,680	561	624	5,008	97	5,172	0	218	0
52 N C STATE UNIV AT RALEIGH	11,226	1,806	287	395	359	6,430	59	689	1,306
53 GEORGE WASHINGTON UNIV	10,810	1,605	70	176	578	5,925	308	1,730	218
54 UNIV ALABAMA BIRMINGHAM	10,729	0	38	0	0	10,687	4	0	0
55 UNIVERSITY OF FLORIDA	10,699	2,367	1,148	110	30	6,375	387	282	0
56 SYRACUSE UNIVERSITY	10,233	3,246E	2,174E	0	610	900	190	1,230	1,883
57 RUTGERS THE STATE UNIV	10,208	702	1,716	283	734	4,281	681	1,753	58
58 ROCKEFELLER UNIVERSITY	9,379	0	517	0	0	7,447	1,415	0	0
59 CARNEGIE-MELLON UNIV	8,783	2,276	2,900	0	2,031	337	410	702	127
60 FLORIDA STATE UNIVERSITY	8,695	9	3,359	1,155	533	1,037	883	1,719	0
TOTAL 1ST 60 INSTS.	1,453,250	209,554	206,104	119,909	40,544	706,771	38,654	84,341	47,373
61 BROWN UNIVERSITY	8,537	1,947	1,519	546	1,246	2,179	391	373	336
62 UNIVERSITY OF VIRGINIA	8,425	2,443	1,290	410	270	3,463	147	92	310
63 BOSTON UNIVERSITY	8,407	66	277	0	0	7,392	13	66	553
64 UNIVERSITY OF GEORGIA	8,353	0	568	0	58	6,975	92	660	0
65 SUNY BUFFALO	8,139	800	638	50	785	4,288	195	1,120	63
66 CUNY MT SINAI SCH OF MED	8,055	0	0	0	0	8,055	0	0	0
67 TULANE UNIVERSITY	7,983	301	105	8	242	6,884	186	155	102
68 U OF TEX M D ANDERSON HOS	7,962	0	712	0	534	6,716	0	0	0
69 UNIV OF MISSOURI COLUMBIA	7,803	579	202	141	56	6,201	89	485	50
70 INDIANA UNIV-BLOOMINGTON	7,744	0	3,159	112	379	1,293	367	1,350	1,084
TOTAL 1ST 70 INSTS.	1,534,658	215,710	216,774	121,176	44,114	760,217	40,134	88,662	49,871
71 UNIVERSITY OF CONNECTICUT	7,618	599	330	258	342	4,998	384	707	0
72 UTAH STATE UNIVERSITY	7,594	3,052	24	1,227	115	2,837	53	286	0
73 UNIV OF RHODE ISLAND	7,466	1,333E	1,517E	0	400E	2,716E	384E	1,116E	0
74 TEMPLE UNIVERSITY	7,190	55	213	0	19	5,113	208	1,341	141
75 EMORY UNIVERSITY	7,141	0	178	0	10	6,853	80	20	0
76 UNIVERSITY OF CINCINNATI	6,903	1,153	251	25	120	4,402	98	37	817
77 SUNY STONY BROOK	6,837	950	1,892	951	532	1,329	513	344	326
78 SUNY UPSTATE MEDICAL CTR	6,720	0	0	0	0	6,720	0	0	0
79 UNIV OF MASS AT AMHERST	6,719	1,107	1,915	974	245	1,259	550	769	0
80 INDIANA UNIVERSITY-PURDUE	6,514	0	0	0	0	6,436	0	78	0
TOTAL 1ST 80 INSTS.	1,605,360	223,959	221,094	124,611	45,897	803,280	42,404	93,360	51,755
81 TUFTS UNIVERSITY	6,393	242	391	0	9	5,340	22	332	57
82 UNIVERSITY OF OREGON	6,361	0	1,376	318	153	1,320	404	2,553	37
83 NEW MEXICO STATE UNIV	6,257	2,770	382	165	49	403	171	1,397	0
84 UNIV OF KENTUCKY ALL CAM	6,248	962	600	123	45	3,966	97	405	250
85 IOWA ST U OF SCI & TECH	6,178	966	612	82	292	3,327	3	1,011	87
86 OKLAHOMA STATE UNIVERSITY	6,122	1,518	224	67	0	2,603	101	36	1,575
87 GEORGIA INSTITUTE OF TECH	6,111	3,600	1,280	127	279	129	28	402	66
88 UNIVERSITY OF DAYTON	6,067	3,053	1,906	0	462	336	0	9	6
89 U TENN MED UNITS MEMPHIS	6,001	0	0	0	0	6,001	0	0	0
90 U OF CAL IRVINE	5,949	272	1,776	0	168	3,631	0	102	0
TOTAL 1ST 90 INSTS.	1,667,047	239,340	228,661	125,493	47,354	830,336	43,430	99,600	52,833
91 BRANDEIS UNIVERSITY	5,810	0	1,221	0	174	2,896	0	1,484	639
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL	MATHE-MATICS	LIFE SCIENCES	PSYCHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 OREGON STATE UNIVERSITY	11,680	561	624	5,008	97	5,172	0	218	0
52 N C STATE UNIV AT RALEIGH	11,326	1,806	287	395	354	6,430	59	689	1,306
53 GEORGE WASHINGTON UNIV	10,810	1,805	70	176	578	5,925	308	1,730	218
54 UNIV ALABAMA BIRMINGHAM	10,729	0	38	0	0	10,687	4	0	0
55 UNIVERSITY OF FLORIDA	10,699	2,367	1,148	110	30	6,375	387	282	0
56 SYRACUSE UNIVERSITY	10,233	3,246E	2,174E	0	610	900	190	1,230	1,883
57 RUTGERS THE STATE UNIV	10,208	702	1,716	283	734	4,281	681	1,753	58
58 ROCKEFELLER UNIVERSITY	9,379	0	517	0	0	7,447	1,415	0	0
59 CARNEGIE-MELLON UNIV	8,783	2,276	2,900	0	2,031	337	410	702	127
60 FLORIDA STATE UNIVERSITY	8,695	9	3,359	1,155	533	1,037	883	1,719	0
TOTAL 1ST 60 INSTS.	1,453,250	209,554	206,104	119,909	40,544	706,771	38,654	84,341	47,373
61 BROWN UNIVERSITY	8,537	1,947	1,519	546	1,246	2,179	391	373	336
62 UNIVERSITY OF VIRGINIA	8,425	2,443	1,290	410	270	3,463	147	92	310
63 BOSTON UNIVERSITY	8,407	86	277	0	0	7,392	13	86	553
64 UNIVERSITY OF GEORGIA	8,353	0	568	0	58	6,975	92	660	0
65 SUNY BUFFALO	8,139	800	838	50	785	4,288	195	1,120	63
66 CUNY MT SINAI SCH OF MED	8,055	0	0	0	0	8,055	0	0	0
67 TULANE UNIVERSITY	7,983	301	105	8	242	6,884	186	155	102
68 U OF TEX M D ANDERSON HOS	7,962	0	712	0	534	6,716	0	0	0
69 UNIV OF MISSOURI COLUMBIA	7,803	579	202	141	56	6,201	89	485	50
70 INDIANA UNIV-BLOOMINGTON	7,744	0	3,159	112	379	1,293	367	1,350	1,084
TOTAL 1ST 70 INSTS.	1,534,658	215,710	214,774	121,176	44,114	760,217	40,134	88,662	49,871
71 UNIVERSITY OF CONNECTICUT	7,618	599	330	258	342	4,998	384	707	0
72 UTAH STATE UNIVERSITY	7,594	3,052	24	1,227	115	2,837	53	286	0
73 UNIV OF RHODE ISLAND	7,466	1,333E	1,517E	0	400E	2,716E	384E	1,116E	0
74 TEMPLE UNIVERSITY	7,190	55	3[illegible]	0	19	5,113	208	1,341	141
75 EMORY UNIVERSITY	7,141	0	[illegible]8	0	10	6,853	80	20	0
76 UNIVERSITY OF CINCINNATI	6,903	1,153	451	25	120	4,802	98	37	417
77 SUNY. STONY BROOK	6,837	950	1,892	951	532	1,329	513	344	326
78 SUNY UPSTATE MEDICAL CTR	6,720	0	0	0	0	6,720	0	0	0
79 UNIV OF MASS AT AMHERST	6,719	1,107	1,815	974	245	1,259	550	769	0
80 INDIANA UNIVERSITY-PURDUE	6,514	0	0	0	0	6,436	0	78	0
TOTAL 1ST 80 INSTS.	1,605,360	223,959	221,094	124,611	45,897	803,280	42,404	93,360	50,755
81 TUFTS UNIVERSITY	6,393	242	391	0	9	5,340	22	332	57
82 UNIVERSITY OF OREGON	6,361	0	1,376	318	153	1,320	604	2,553	37
83 NEW MEXICO STATE UNIV	6,257	3,770	302	165	49	403	171	1,397	0
84 UNIV OF KENTUCKY ALL CAM	6,248	962	400	123	45	3,966	97	405	250
85 IOWA ST U OF SCI & TECH	6,178	964	412	82	292	3,327	3	1,011	87
86 OKLAHOMA STATE UNIVERSITY	6,122	1,518	224	67	0	2,603	101	34	1,575
87 GEORGIA INSTITUTE OF TECH	6,111	3,800	1,280	127	279	129	28	402	66
88 UNIVERSITY OF DAYTON	6,067	3,853	1,406	0	462	336	0	4	6
89 U TENN MED UNITS MEMPHIS	6,001	0	0	0	0	6,001	0	0	0
90 U OF CAL IRVINE	5,949	272	1,776	0	168	3,631	0	102	0
TOTAL 1ST 90 INSTS.	1,667,047	239,340	228,661	125,493	47,354	830,336	43,430	99,600	52,833
91 BRANDEIS UNIVERSITY	5,814	0	1,221	0	174	2,096	0	1,684	639
92 UNIV OF MD BALTIMORE	5,695	0	0	0	0	5,695	0	0	0
93 U OF CAL RIVERSIDE	5,606	1,132	1,385	880	168	1,700	71	270	0
94 KANSAS ST UNIVERSITY	5,517	470	276	254	185	3,452	68	362	450
95 UNIVERSITY OF DENVER	5,437	2,270	1,097	23	180	149	250	1,403	65
96 VIRGINIA COMMONWLTH UNIV	5,282	0	0	0	0	5,282	0	0	0
97 VIRGINIA POLYTECHNIC INST	5,189	1,132	1,067	280	147	2,343	4	141	75
98 UNIVERSITY OF NEW MEXICO	5,093	2,118	262	236	64	2,012	248	63	90
99 INDIANA UNIV NORTHWEST	5,077	0	0	0	0	0	0	5,077	0
100 GEORGETOWN UNIVERSITY	5,026	0	610	0	29	3,920	28	121	318
TOTAL 1ST 100 INSTS.	1,720,783	246,462	234,579	127,166	48,301	856,985	44,099	108,721	54,470

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-27.
CONTINUED

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 RICE UNIVERSITY	4,971	1,421	2,128	264	338	415	10	395	0
102 U TEX HLTH SCI CTR DALLAS	4,941	0	0	0	0	4,941	0	0	0
103 LA ST U BATON ROUGE	4,833	526	984	1,477	111	1,565	95	75	0
104 UNIV OKLAHOMA	4,797E	452	232	370	360	2,792E	79	366	146
105 RENSSELAER POLY INST	4,796E	2,990E	1,276E	90E	250E	190E	0	0	0
106 ST LOUIS UNIV	4,771	302	59	270	0	3,852E	14	1	273
107 UNIV OF VT & ST AGRIC COL	4,761	76	185	111	5	3,780	399	205	0
108 WEST VIRGINIA UNIVERSITY	4,736	4,232	32	0	0	3,368	54	50	0
109 U OF OREGON MED SCHOOL	4,571E	0	0	0	0	4,571E	0	0	0
110 WASHINGTON STATE UNIV	4,559	805	860	0	115	1,934	121	724	0
TOTAL 1ST 110 INSTS.	1,768,519	254,266	240,335	129,748	49,480	884,393	44,871	110,537	54,889
111 UNIVERSITY OF WYOMING	4,531	385	1,358	1,380	0	1,199	132	40	37
112 DARTMOUTH COLLEGE	4,501	435	274	254	138	2,986	196	50	168
113 U OF ILL MEDICAL CENTER	4,330	0	22	0	0	4,308	0	0	0
114 UNIV OF MAINE ORONO	4,307	287	164	1,291	0	1,865	57	643	0
115 U TEX GALVESTON MED BRAN	4,224	0	0	0	0	4,224	0	0	0
116 MISSISSIPPI STATE UNIV	4,216	489	246	0	0	3,117	0	364	0
117 U OF CAL SANTA BARBARA	4,146	189	1,534	484	441	705	476	317	0
118 SUNY DOWNSTATE MED CTR	4,126	0	0	0	0	4,126	0	0	0
119 SUNY ALBANY	4,125	0	502	852	179	1,055	74	1,381	82
120 UNIVERSITY OF NOTRE DAME	4,096	764	2,273	0	128	874	34	23	0
TOTAL 1ST 120 INSTS.	1,811,121	256,815	246,708	134,009	50,366	908,852	45,840	113,355	55,176
121 AUBURN UNIVERSITY	4,078	888	0	540	0	2,360	0	290	0
122 UNIV OF NEBRASKA - LNCLN	3,990	400	475	267	94	2,528	39	187	0
123 THOS JEFFERSON UNIV HOSP	3,873	0	0	0	0	3,873	0	0	0
124 UNIV OF MISSISSIPPI	3,865	70	152	0	0	3,451	110	82	0
125 UNIVERSITY OF IDAHO	3,759	326	204	255	0	2,210	2	248	514
126 WAYNE STATE UNIVERSITY	3,741	436	691	6	44	2,265	103	196	0
127 U TENNESSEE KNOXVILLE	3,555	1,663	627	32	41	701	142	322	27
128 NEW YORK MEDICAL COLLEGE	3,550	0	0	0	0	3,550	0	0	0
129 UNIVERSITY OF DELAWARE	3,500	724	687	1,103	25	590	154	217	0
130 THE MED COLL OF WISCONSIN	3,372	0	0	0	0	3,372	0	0	0
TOTAL 1ST 130 INSTS.	1,848,404	261,322	249,544	136,212	50,570	933,752	46,390	114,897	55,717
131 LEHIGH UNIVERSITY	3,274	1,725	395	314	462	54	25	10	289
132 WAKE FOREST UNIVERSITY	3,180E	0	55	0	14	2,849E	49	196E	17E
133 GEO PEABODY COL TEACHERS	3,162	0	0	0	11	0	2,409	0	742
134 ALBANY MED COL OF UNION U	3,127	0	0	0	0	3,127	0	0	0
135 U PUERTO RICO SAN JUAN	3,080E	0	0	0	0	3,080E	0	0	0
136 POLYTECHNIC INST OF N Y	3,012	2,468	432	0	50	0	0	0	62
137 U OF HEB MED C AT OMAHA	2,984E	0	0	0	0	2,984E	0	0	0
138 US NAVAL POSTGRAD SCHOOL	2,925	1,146	373	522	848	0	0	36	0
139 COL OF MED & DENT OF N J	2,902	0	0	0	0	2,902	0	0	0
140 U TEX HLTH SCI CR HOUSTON	2,884	0	0	0	0	2,884	0	0	0
TOTAL 1ST 140 INSTS.	1,878,934	266,661	250,799	137,048	51,955	951,632	48,873	115,139	56,827
141 HOWARD UNIVERSITY	2,863	93	226	0	0	1,839	32	630	43
142 UNIV OF NEW HAMPSHIRE	2,846	653	781	180	21	1,056	155	0	0
143 S U N Y SYSTEM OFFICE	2,812	333I	368I	248I	64I	1,442I	89I	181I	87I
144 UNIVERSITY OF ARKANSAS	2,811	199	243	402	3	1,554	13	397	0
145 BUSH MEDICAL COLLEGE	2,792	0	0	0	0	2,383	85	0	324
146 U TEX HLTH SCI CR SAN ANT	2,599	0	0	0	0	2,599	0	0	0
147 ILLINOIS INST OF TECH	2,571	841	530	85	178	291	141	139	366

101 RICE UNIVERSITY	4,971	1,421	2,128	264	338	415	10	395	0
102 U TEX HLTH SCI CTR DALLAS	4,941	0	0	0	0	4,941	0	0	0
103 LA ST U BATON ROUGE	4,833	526	984	1,477	111	1,565	95	75	0
104 UNIV OKLAHOMA	4,797E	452	232	370	360	2,792E	79	366	146
105 RENSSELAER POLY INST	4,796E	2,990E	1,276E	90E	250E	190E	0	0	0
106 ST LOUIS UNIV	4,771	302	59	270	0	3,852E	14	1	273
107 UNIV OF VT & ST AGRIC COL	4,761	76	185	111	5	3,780	399	205	0
108 WEST VIRGINIA UNIVERSITY	4,736	1,232	32	0	0	3,368	54	50	0
109 U OF OREGON MED SCHOOL	4,571E	0	0	0	0	4,571E	0	0	0
110 WASHINGTON STATE UNIV	4,559	805	860	0	115	1,934	121	724	0
TOTAL 1ST 110 INSTS.	1,768,519	254,266	240,335	129,748	49,480	884,393	44,871	110,537	54,889
111 UNIVERSITY OF WYOMING	4,531	385	1,358	1,380	0	1,199	132	40	37
112 DARTMOUTH COLLEGE	4,501	435	274	254	138	2,986	196	50	168
113 U OF ILL MEDICAL CENTER	4,330	0	22	0	0	4,308	0	0	0
114 UNIV OF MAINE ORONO	4,307	287	164	1,291	0	1,865	57	643	0
115 U TEX GALVESTON MED BRAN	4,224	0	0	0	0	4,224	0	0	0
116 MISSISSIPPI STATE UNIV	4,216	489	246	0	0	3,117	0	364	0
117 U OF CAL SANTA BARBARA	4,146	189	1,534	484	441	705	476	317	0
118 SUNY DOWNSTATE MED CTR	4,126	0	0	0	0	4,126	0	0	0
119 SUNY ALBANY	4,125	0	502	852	179	1,055	74	1,381	82
120 UNIVERSITY OF NOTRE DAME	4,096	764	2,273	0	128	874	34	23	0
TOTAL 1ST 120 INSTS.	1,811,121	256,815	246,708	134,009	50,366	908,852	45,840	113,355	55,176
121 AUBURN UNIVERSITY	4,078	888	0	540	0	2,360	0	290	0
122 UNIV OF NEBRASKA - LNCLN	3,990	400	475	267	94	2,528	39	187	0
123 THOM JEFFERSON UNIV HOSP	3,873	0	0	0	0	3,873	0	0	0
124 UNIV OF MISSISSIPPI	3,865	70	152	0	0	3,451	110	82	0
125 UNIVERSITY OF IDAHO	3,759	326	204	255	0	2,210	2	248	514
126 WAYNE STATE UNIVERSITY	3,741	436	691	6	44	2,265	103	196	0
127 U TENNESSEE KNOXVILLE	3,555	1,663	627	32	41	701	142	322	27
128 NEW YORK MEDICAL COLLEGE	3,550	0	0	0	0	3,550	0	0	0
129 UNIVERSITY OF DELAWARE	3,500	724	687	1,103	25	590	154	217	0
130 THE MED COLL OF WISCONSIN	3,372	0	0	0	0	3,372	0	0	0
TOTAL 1ST 130 INSTS.	1,848,404	261,322	249,544	136,212	50,570	933,752	46,390	114,897	55,717
131 LEHIGH UNIVERSITY	3,274	1,725	395	314	462	54	25	10	289
132 WAKE FOREST UNIVERSITY	3,180E	0	55	0	14	2,849E	49	195E	17E
133 GEO PEABODY COL TEACHERS	3,162	0	0	0	11	0	2,409	0	742
134 ALBANY MED COL OF UNION U	3,127	0	0	0	0	3,127	0	0	0
135 U PUERTO RICO SAN JUAN	3,080E	0	0	0	0	3,080E	0	0	0
136 POLYTECHNIC INST OF N Y	3,012	2,468	432	0	50	0	0	0	62
137 U OF NEB MED C AT OMAHA	2,984E	0	0	0	0	2,984E	0	0	0
138 US NAVAL POSTGRAD SCHOOL	2,925	1,146	373	522	848	0	0	36	0
139 COL OF MED & DENT OF N J	2,902	0	0	0	0	2,902	0	0	0
140 U TEX HLTH SCI CR HOUSTON	2,884	0	0	0	0	2,884	0	0	0
TOTAL 1ST 140 INSTS.	1,878,934	266,661	250,799	137,048	51,955	951,632	48,873	115,139	56,827
141 HOWARD UNIVERSITY	2,863	93	226	0	0	1,839	32	630	43
142 UNIV OF NEW HAMPSHIRE	2,846	653	781	180	21	1,056	155	0	0
143 S U N Y SYSTEM OFFICE	2,812	333I	368I	248I	64I	1,442I	89I	181I	87I
144 UNIVERSITY OF ARKANSAS	2,811	199	243	402	3	1,554	13	397	0
145 RUSH MEDICAL COLLEGE	2,792	0	0	0	0	2,383	85	0	324
146 U TEX HLTH SCI CR SAN ANT	2,599	0	0	0	0	2,599	0	0	0
147 ILLINOIS INST OF TECH	2,571	841	530	85	178	291	141	139	366
148 BOSTON COLLEGE	2,552E	0	597E	187E	901E	65E	4E	395E	403E
149 HAHNEMANN MEDICAL COLLEGE	2,517	0	0	0	0	2,517	0	0	0
150 MONTANA STATE UNIVERSITY	2,450	450	319	196	5	1,368	0	112	0
TOTAL 1ST 150 INSTS.	1,905,747	269,230	253,863	138,346	53,127	966,746	49,392	116,993	58,050
ALL OTHER INSTITUTIONS	138,611	19,080	27,041	10,950	3,181	46,084	9,197	18,788	4,290

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-28.

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	1,145,420	133,651	153,627	102,011	26,786	570,272	37,451	86,719	34,903
1 U OF CAL SAN DIEGO	60,945	721	9,553	27,174	335	22,224	491	244	203
2 UNIVERSITY OF WASHINGTON	47,305	3,770	4,022	7,705	305	30,712	428	363	0
3 UNIV OF WISCONSIN-MADISON	45,783	1,554	5,921	5,610	1,679	16,888	3,207	8,326	2,598
4 UNIVERSITY OF MICHIGAN	45,021	12,338	2,836	1,764	866	17,684	2,485	7,048	0
5 U OF CAL LOS ANGELES	44,011	4,509	4,257	3,689	1,049	26,072	2,675	1,312	448
6 U OF CAL BERKELEY	42,716	8,320	8,629	525	1,289	17,420	1,451	4,502	580
7 UNIVERSITY OF MINNESOTA	30,800	2,960	3,765	454	635	18,545	822	2,391	1,228
8 UNIV ILLINOIS URBANA	27,404	8,681	4,829	2,156	3,050	4,679	1,212	1,425	1,372
9 UNIVERSITY OF COLORADO	26,774	1,062	6,911	216	538	11,042	1,549	1,451	4,005
10 U OF CAL SAN FRANCISCO	24,042	0	0	0	86	23,956	0	0	0
TOTAL 1ST 10 INSTS.	394,801	43,915	50,723	49,293	9,832	189,222	14,320	27,062	10,434
11 MICHIGAN STATE UNIVERSITY	20,554	702	2,678	282	48	10,833	799	3,080	1,700
12 UNIV OF NC AT CHAPEL HILL	19,930	1,056	955	35	25	12,156	254	178	5,011
13 OHIO STATE UNIVERSITY	19,693	3,839	2,078	857	492	7,584	252	4,064	527
14 UNIVERSITY OF UTAH	18,460	1,459	2,507	625	770	12,175	497	427	0
15 U OF CAL DAVIS	17,712	924	846	124	103	14,781	73	861	0
16 UNIV OF TEXAS AT AUSTIN	17,391	2,339	3,871	169	444	3,443	1,482	1,667	3,976
17 PENNSYLVANIA STATE UNIV	17,201E	2,463	2,602	2,205	117	6,471E	458E	1,809	1,076
18 PURDUE UNIV ALL CAMPUSES	16,692	4,877	2,857	265	768	6,232	557	1,038	98
19 UNIVERSITY OF HAWAII	16,136	1,690	2,539	4,311	43	5,938	75	1,057	483
20 COLORADO STATE UNIVERSITY	15,415	3,853	415	2,584	204	5,964	628	949	818
TOTAL 1ST 20 INSTS.	573,985	67,117	72,071	60,750	13,538	274,799	19,395	42,192	24,123
21 TEXAS A & M UNIVERSITY	15,021	4,352	1,964	2,983	41	5,135	0	273	273
22 UNIVERSITY OF ARIZONA	14,409	864	5,296	1,210	74	5,220	831	914	0
23 UNIVERSITY OF KANSAS	14,141	1,428	969	51	329	8,253	2,261	850	0
24 UNIVERSITY OF IOWA	13,853	627	3,423	31	326	8,796	161	489	0
25 UNIVERSITY OF PITTSBURGH	13,074	460	2,828	152	69	8,990	221	189	165
26 UNIV OF MD COLLEGE PARK	12,635	2,075	6,352	785	796	1,828	292	384	123
27 UNIVERSITY OF ALASKA	11,822	64	4,398	4,477	2	2,751	0	130	0
28 OREGON STATE UNIVERSITY	11,680	551	624	5,008	97	5,172	0	218	0
29 N C STATE UNIV AT RALEIGH	11,326	1,806	287	395	354	6,430	59	689	1,306
30 UNIV ALABAMA BIRMINGHAM	10,729	0	38	0	0	10,687	4	0	0
TOTAL 1ST 30 INSTS.	702,675	79,354	98,250	75,842	15,626	338,061	23,224	46,328	25,990
31 UNIVERSITY OF FLORIDA	10,699	2,367	1,148	110	30	6,375	387	282	0
32 RUTGERS THE STATE UNIV	10,208	702	1,716	283	734	4,281	681	1,753	58
33 FLORIDA STATE UNIVERSITY	8,695	9	3,359	1,155	533	1,037	883	1,719	0
34 UNIVERSITY OF VIRGINIA	8,425	2,443	1,290	410	270	3,463	147	92	310
35 UNIVERSITY OF GEORGIA	8,353	0	568	0	58	6,975	92	660	0
36 SUNY BUFFALO	8,139	800	838	50	785	4,288	195	1,120	63
37 CUNY MT SINAI SCH OF MED	8,055	0	0	0	0	8,055	0	0	0
38 U OF TEX M D ANDERSON HOS	7,962	0	712	0	534	6,716	0	0	0
39 UNIV OF MISSOURI COLUMBIA	7,803	579	202	141	56	6,201	89	485	50
40 INDIANA UNIV-BLOOMINGTON	7,744	0	3,159	112	379	1,293	367	1,350	1,084
TOTAL 1ST 40 INSTS.	788,758	86,254	111,242	78,103	19,005	386,745	26,065	53,789	27,555

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	1,145,420	133,651	153,627	102,011	26,786	570,272	37,451	86,719	34,903
1 U OF CAL SAN DIEGO	60,945	721	9,553	27,174	335	22,224	491	244	203
2 UNIVERSITY OF WASHINGTON	47,305	3,770	4,022	7,705	305	30,712	428	363	0
3 UNIV OF WISCONSIN-MADISON	45,783	1,554	5,921	5,610	1,679	16,888	3,207	8,326	2,598
4 UNIVERSITY OF MICHIGAN	45,021	12,338	2,836	1,764	866	17,684	2,485	7,048	0
5 U OF CAL LOS ANGELES	44,011	4,509	4,257	3,689	1,049	26,072	2,675	1,312	448
6 U OF CAL BERKELEY	42,716	8,320	8,629	525	1,289	17,420	1,451	4,502	580
7 UNIVERSITY OF MINNESOTA	30,800	2,960	3,765	454	635	18,545	822	2,391	1,228
8 UNIV ILLINOIS URBANA	27,404	8,681	4,829	2,156	3,050	4,679	1,212	1,425	1,372
9 UNIVERSITY OF COLORADO	26,774	1,062	6,911	216	538	11,042	1,549	1,451	4,005
10 U OF CAL SAN FRANCISCO	24,042	0	0	0	86	23,956	0	0	0
TOTAL 1ST 10 INSTS.	394,801	43,915	50,723	49,293	9,832	189,222	14,320	27,062	10,434
11 MICHIGAN STATE UNIVERSITY	20,554	702	2,678	282	480	10,833	799	3,080	1,700
12 UNIV OF NC AT CHAPEL HILL	19,930	1,056	955	35	285	12,156	254	178	5,011
13 OHIO STATE UNIVERSITY	19,693	3,839	2,078	857	492	7,584	252	4,064	527
14 UNIVERSITY OF UTAH	18,460	1,459	2,507	625	770	12,175	497	427	0
15 U OF CAL DAVIS	17,712	924	846	124	103	14,781	73	861	0
16 UNIV OF TEXAS AT AUSTIN	17,391	2,339	3,871	169	444	3,443	1,482	1,667	3,976
17 PENNSYLVANIA STATE UNIV	17,201E	2,463	2,602	2,205	117	6,471E	458E	1,809	1,076
18 PURDUE UNIV ALL CAMPUSES	16,692	4,877	2,857	265	768	6,232	557	1,038	98
19 UNIVERSITY OF HAWAII	16,136	1,690	2,539	4,311	43	5,938	75	1,057	483
20 COLORADO STATE UNIVERSITY	15,415	3,853	415	2,584	204	5,964	628	949	818
TOTAL 1ST 20 INSTS.	573,985	67,117	72,071	60,750	13,538	274,799	19,395	42,192	24,123
21 TEXAS A & M UNIVERSITY	15,021	4,352	1,964	2,983	41	5,135	0	273	273
22 UNIVERSITY OF ARIZONA	14,409	864	5,296	1,210	74	5,220	831	914	0
23 UNIVERSITY OF KANSAS	14,141	1,428	969	51	329	8,253	2,261	850	0
24 UNIVERSITY OF IOWA	13,853	627	3,423	31	326	8,796	161	489	0
25 UNIVERSITY OF PITTSBURGH	13,074	460	2,828	152	69	8,990	221	189	165
26 UNIV OF MD COLLEGE PARK	12,635	2,075	6,352	785	796	1,828	292	384	123
27 UNIVERSITY OF ALASKA	11,822	64	4,398	4,477	2	2,751	0	130	0
28 OREGON STATE UNIVERSITY	11,680	551	624	5,008	97	5,172	0	218	0
29 N C STATE UNIV AT RALEIGH	11,326	1,806	287	395	354	6,430	59	689	1,306
30 UNIV ALABAMA BIRMINGHAM	10,729	0	38	0	0	10,687	4	0	0
TOTAL 1ST 30 INSTS.	702,675	79,354	98,250	75,842	15,626	338,061	23,224	46,328	25,990
31 UNIVERSITY OF FLORIDA	10,699	2,367	1,148	110	30	6,375	387	282	0
32 RUTGERS THE STATE UNIV	10,208	702	1,716	283	734	4,281	681	1,753	58
33 FLORIDA STATE UNIVERSITY	8,695	9	3,359	1,155	533	1,037	883	1,719	0
34 UNIVERSITY OF VIRGINIA	8,425	2,443	1,290	410	270	3,463	147	92	310
35 UNIVERSITY OF GEORGIA	8,353	0	568	0	58	6,975	92	660	0
36 SUNY BUFFALO	8,139	800	838	50	785	4,288	195	1,120	63
37 CUNY MT SINAI SCH OF MED	8,055	0	0	0	0	8,055	0	0	0
38 U OF TEX M D ANDERSON HOS	7,962	0	712	0	534	6,716	0	0	0
39 UNIV OF MISSOURI COLUMBIA	7,803	579	202	141	56	6,201	89	485	50
40 INDIANA UNIV-BLOOMINGTON	7,744	0	3,159	112	379	1,293	367	1,350	1,084
TOTAL 1ST 40 INSTS.	788,758	86,254	111,242	78,103	19,005	386,745	26,065	53,789	27,555
41 UNIVERSITY OF CONNECTICUT	7,618	599	330	258	342	4,998	384	707	0
42 UTAH STATE UNIVERSITY	7,594	3,052	24	1,227	115	2,837	53	286	0
43 UNIV OF RHODE ISLAND	7,466	1,333E	1,517E	0	400E	2,716E	384E	1,116E	0
44 UNIVERSITY OF CINCINNATI	6,903	1,153	251	25	120	4,802	98	37	417
45 SUNY STONY BROOK	6,837	950	1,892	951	532	1,329	513	344	326
46 SUNY UPSTATE MEDICAL CTR	6,720	0	0	0	0	6,720	0	0	0
47 UNIV OF MASS AT AMHERST	6,719	1,107	1,815	974	245	1,259	550	769	0
48 INDIANA UNIVERSITY-PURDUE	6,514	0	0	0	0	6,436	0	78	0
49 UNIVERSITY OF OREGON	6,361	0	1,376	318	153	1,320	604	2,553	37
50 NEW MEXICO STATE UNIV	6,257	3,770	302	165	49	403	171	1,397	0
TOTAL 1ST 50 INSTS.	857,747	98,218	118,749	82,021	20,961	419,565	28,822	61,076	28,335

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-28.
CONTINUED

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES
IN PUBLIC UNIVERSITIES AND COLLEGES IN DESCENDING ORDER
OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIV OF KENTUCKY ALL CAM	6,248	962	400	123	45	3,966	97	405	250
52 IOWA ST U OF SCI & TECH	6,178	964	412	82	292	3,327	3	1,011	87
53 OKLAHOMA STATE UNIVERSITY	6,122	1,518	224	67	0	2,603	101	34	1,575
54 GEORGIA INSTITUTE OF TECH	6,111	3,800	1,280	127	279	129	28	402	66
55 U TENN MED UNITS MEMPHIS	6,001	0	0	0	0	6,001	0	0	0
56 U OF CAL IRVINE	5,949	272	1,776	0	168	3,631	0	102	0
57 UNIV OF MD BALTIMORE	5,695	0	0	0	0	5,695	0	0	0
58 U OF CAL RIVERSIDE	5,606	1,132	1,385	880	168	1,700	71	270	0
59 KANSAS ST UNIVERSITY	5,517	470	276	254	185	3,452	68	362	450
60 VIRGINIA COMMONWLTH UNIV	5,282	0	0	0	0	5,282	0	0	0
TOTAL 1ST 60 INSTS.	916,456	107,336	124,502	83,554	22,098	455,351	29,190	63,662	30,763
61 VIRGINIA POLYTECHNIC INST	5,189	1,132	1,067	280	147	2,343	4	141	75
62 UNIVERSITY OF NEW MEXICO	5,093	2,118	262	236	64	2,012	248	63	90
63 INDIANA UNIV NORTHWEST	5,077	0	0	0	0	0	0	5,077	0
64 U TEX HLTH SCI CTR DALLAS	4,941	0	0	0	0	4,941	0	0	0
65 LA ST U BATON ROUGE	4,833	526	984	1,477	111	1,565	95	75	0
66 UNIV OKLAHOMA	4,797E	452	232	370	360	2,792E	79	366	146
67 UNIV OF VT & ST AGRIC COL	4,761	76	185	111	5	3,780	399	205	0
68 WEST VIRGINIA UNIVERSITY	4,736	1,232	32	0	0	3,368	54	50	0
69 U OF OREGON MED SCHOOL	4,571E	0	0	0	0	4,571E	0	0	0
70 WASHINGTON STATE UNIV	4,559	805	860	0	115	1,934	121	724	0
TOTAL 1ST 70 INSTS.	965,013	113,677	128,124	86,028	22,900	482,657	30,190	70,363	31,074
71 UNIVERSITY OF WYOMING	4,531	385	1,358	1,380	0	1,199	132	40	37
72 U OF ILL MEDICAL CENTER	4,330	0	22	0	0	4,308	0	0	0
73 UNIV OF MAINE ORONO	4,307	287	164	1,291	0	1,865	57	643	0
74 U TEX GALVESTON MED BRAN	4,224	0	0	0	0	4,224	0	0	0
75 MISSISSIPPI STATE UNIV	4,216	489	246	0	0	3,117	0	364	0
76 U OF CAL SANTA BARBARA	4,146	189	1,534	484	441	705	476	317	0
77 SUNY DOWNSTATE MED CTR	4,126	0	0	0	0	4,126	0	0	0
78 SUNY ALBANY	4,125	0	502	852	179	1,055	74	1,381	82
79 AUBURN UNIVERSITY	4,078	888	0	540	0	2,360	0	290	0
80 UNIV OF NEBRASKA - LNCLN	3,990	400	475	267	94	2,528	39	187	0
TOTAL 1ST 80 INSTS.	1,007,086	116,315	132,425	90,842	23,614	508,144	30,968	73,585	31,193
81 UNIV OF MISSISSIPPI	3,865	70	152	0	0	3,451	110	82	0
82 UNIVERSITY OF IDAHO	3,759	326	204	255	0	2,210	2	248	514
83 WAYNE STATE UNIVERSITY	3,741	436	691	6	44	2,265	103	196	0
84 U TENNESSEE KNOXVILLE	3,555	1,663	627	32	41	701	142	322	27
85 UNIVERSITY OF DELAWARE	3,500	724	687	1,103	25	590	154	217	0
86 U PUERTO RICO SAN JUAN	3,080E	0	0	0	0	3,080E	0	0	0
87 U OF NEB MED C AT OMAHA	2,984E	0	0	0	0	2,984E	0	0	0
88 US NAVAL POSTGRAD SCHOOL	2,925	1,146	373	522	848	0	0	36	0
89 COL OF MED & DENT OF N J	2,902	0	0	0	0	2,902	0	0	0
90 U TEX HLTH SCI CR HOUSTON	2,884	0	0	0	0	2,884	0	0	0
TOTAL 1ST 90 INSTS.	1,040,281	120,680	135,159	92,760	24,572	529,211	31,479	74,686	31,734
91 UNIV OF NEW HAMPSHIRE	2,846	653	781	180	21	1,056	155	0	0
92 S U N Y SYSTEM OFFICE	2,812	333I	368I	248I	64I	1,442I	89I	181I	87I
93 UNIVERSITY OF ARKANSAS	2,811	199	243	402	3	1,554	13	397	0
94 U TEX HLTH SCI CR SAN ANT	2,599	0	0	0	0	2,599	0	0	0
95 MONTANA STATE UNIVERSITY	2,450	450	319	196	5	1,368	0	112	0
96 UNIVERSITY OF HOUSTON	2,436	566	627	54	73	401	487	227	1

51 UNIV OF KENTUCKY ALL CAM	6,248	962	400	123	45	3,966	97	405	250
52 IOWA ST U OF SCI & TECH	6,178	964	412	82	292	3,327	3	1,011	87
53 OKLAHOMA STATE UNIVERSITY	6,122	1,518	224	67	0	2,603	101	34	1,575
54 GEORGIA INSTITUTE OF TECH	6,111	3,800	1,280	127	279	129	28	402	66
55 U TENN MED UNITS MEMPHIS	6,001	0	0	0	0	6,001	0	0	0
56 U OF CAL IRVINE	5,949	272	1,776	0	168	3,631	0	102	0
57 UNIV OF MD BALTIMORE	5,695	0	0	0	0	5,695	0	0	0
58 U OF CAL RIVERSIDE	5,606	1,132	1,385	880	168	1,700	71	270	0
59 KANSAS ST UNIVERSITY	5,517	470	276	254	185	3,452	68	362	450
60 VIRGINIA COMMONWLTH UNIV	5,282	0	0	0	0	5,282	0	0	0
TOTAL 1ST 60 INSTS.	916,456	107,336	124,502	83,554	22,098	455,351	29,190	63,662	30,763
61 VIRGINIA POLYTECHNIC INST	5,189	1,132	1,067	280	147	2,343	4	141	75
62 UNIVERSITY OF NEW MEXICO	5,093	2,118	262	236	64	2,012	248	63	90
63 INDIANA UNIV NORTHWEST	5,077	0	0	0	0	0	0	5,077	0
64 U TEX HLTH SCI CTR DALLAS	4,941	0	0	0	0	4,941	0	0	0
65 LA ST U BATON ROUGE	4,833	526	984	1,477	111	1,565	95	75	0
66 UNIV OKLAHOMA	4,797E	452	232	370	360	2,792E	79	366	146
67 UNIV OF VT & ST AGRIC COL	4,761	76	185	111	5	3,780	399	205	0
68 WEST VIRGINIA UNIVERSITY	4,736	1,232	32	0	0	3,368	54	50	0
69 U OF OREGON MED SCHOOL	4,571E	0	0	0	0	4,571E	0	0	0
70 WASHINGTON STATE UNIV	4,559	805	860	0	115	1,934	121	724	0
TOTAL 1ST 70 INSTS.	965,013	113,677	128,124	86,028	22,900	482,657	30,190	70,363	31,074
71 UNIVERSITY OF WYOMING	4,531	385	1,358	1,380	0	1,199	132	40	37
72 U OF ILL MEDICAL CENTER	4,330	0	22	0	0	4,308	0	0	0
73 UNIV OF MAINE ORONO	4,307	287	164	1,291	0	1,865	57	643	0
74 U TEX GALVESTON MED BRAN	4,224	0	0	0	0	4,224	0	0	0
75 MISSISSIPPI STATE UNIV	4,216	489	246	0	0	3,117	0	364	0
76 U OF CAL SANTA BARBARA	4,146	189	1,534	484	441	705	476	317	0
77 SUNY DOWNSTATE MED CTR	4,126	0	0	0	0	4,126	0	0	0
78 SUNY ALBANY	4,125	0	502	852	179	1,055	74	1,381	82
79 AUBURN UNIVERSITY	4,078	888	0	540	0	2,360	0	290	0
80 UNIV OF NEBRASKA - LNCLN	3,990	400	475	267	94	2,528	39	187	0
TOTAL 1ST 80 INSTS.	1,007,086	116,315	132,425	90,842	23,614	508,144	30,968	73,585	31,193
81 UNIV OF MISSISSIPPI	3,865	70	152	0	0	3,451	110	82	0
82 UNIVERSITY OF IDAHO	3,759	326	204	255	0	2,210	2	248	514
83 WAYNE STATE UNIVERSITY	3,741	436	691	6	44	2,265	103	196	0
84 U TENNESSEE KNOXVILLE	3,555	1,663	627	32	41	701	142	322	27
85 UNIVERSITY OF DELAWARE	3,500	724	687	1,103	25	590	154	217	0
86 U PUERTO RICO SAN JUAN	3,080E	0	0	0	0	3,080E	0	0	0
87 U OF NEB MED C AT OMAHA	2,984E	0	0	0	0	2,984E	0	0	0
88 US NAVAL POSTGRAD SCHOOL	2,925	1,146	373	522	848	0	0	36	0
89 COL OF MED & DENT OF N J	2,902	0	0	0	0	2,902	0	0	0
90 U TEX HLTH SCI CR HOUSTON	2,884	0	0	0	0	2,884	0	0	0
TOTAL 1ST 90 INSTS.	1,040,281	120,680	135,159	92,760	24,572	529,211	31,479	74,686	31,734
91 UNIV OF NEW HAMPSHIRE	2,846	653	781	180	21	1,056	155	0	0
92 S U N Y SYSTEM OFFICE	2,812	333I	368I	248I	64I	1,442I	89I	181I	87I
93 UNIVERSITY OF ARKANSAS	2,811	199	243	402	3	1,554	13	397	0
94 U TEX HLTH SCI CR SAN ANT	2,599	0	0	0	0	2,599	0	0	0
95 MONTANA STATE UNIVERSITY	2,450	450	319	196	5	1,368	0	112	0
96 UNIVERSITY OF HOUSTON	2,436	566	627	54	73	401	487	227	1
97 U PUERTO RICO MAYAGUEZ	2,416	8	1,911	57	0	311	0	0	129
98 UNIV OF NO SYSTEM OFC	2,368	0	0	38	0	2,330	0	0	0
99 SAN DIEGO ST UNIVERSITY	2,272	36	221	54	0	564	763	19	615
100 CLEMSON UNIVERSITY	2,260	271	75	157	38	1,321	0	236	162
TOTAL 1ST 100 INSTS.	1,065,551	123,196	139,704	94,146	24,776	542,157	32,986	75,858	32,728
ALL OTHER INSTITUTIONS	79,869	10,455	13,923	7,865	2,010	28,115	4,465	10,861	2,175

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-29.

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN PRIVATE UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	898,938	154,659	127,277	47,285	29,522	442,558	21,138	49,062	27,437
1 MASS INST OF TECHNOLOGY	112,652	68,674	19,204	4,326	7,988	8,900	860	2,453	247
2 STANFORD UNIVERSITY	50,751	9,047	8,272	2,589	3,315	21,033	631	5,175	689
3 HARVARD UNIVERSITY	47,765	630	8,089	4,280	491	29,040	558	4,593	84
4 COLUMBIA UNIV MAIN DIV	46,362	1,690	4,281	8,618	418	21,248	260	2,481	7,366
5 UNIVERSITY OF CHICAGO	37,930	0	8,321	1,620	1,064	23,639	572	2,714	0
6 JOHNS HOPKINS UNIVERSITY	35,416	863	2,181	1,286	160	30,004	290	536	96
7 CORNELL UNIVERSITY	32,273	5,299	8,425	272	849	15,625	154	1,588	61
8 UNIV OF PENNSYLVANIA	31,388	2,028	3,954	67	247	18,379	489	2,290	3,934
9 UNIVERSITY OF ROCHESTER	30,135	1,216	3,756	158	234	21,210	1,779	536	1,246
10 YALE UNIVERSITY	29,697	1,383	4,503	848	420	20,056	1,020	1,467	0
TOTAL 1ST 10 INSTS.	454,369	90,830	70,986	24,064	15,186	209,134	6,613	23,833	13,723
11 NEW YORK UNIVERSITY	27,081	2,188	2,193	679	2,911	16,858	834	1,399	19
12 WASHINGTON UNIV ST LOUIS	22,666	3,112	1,240	6	109	14,909	148	300	2,842
13 UNIV OF STHRN CALIFORNIA	21,855	6,154	759	1,348	130	11,364	482	1,618	0
14 YESHIVA UNIVERSITY	21,571	0	1,174	0	392	18,957	1,048	0	0
15 DUKE UNIVERSITY	19,296	606	2,050	0	225	15,544	534	318	19
16 UNIVERSITY OF MIAMI	18,237	983	680	2,945	25	12,587	136	812	69
17 CALIFORNIA INST OF TECH	16,603	3,532	6,746	2,813	219	2,843	0	299	151
18 CASE WESTERN RESERVE UNIV	15,154	4,110	1,979	238	166	8,169	103	389	0
19 PRINCETON UNIVERSITY	13,742	3,642	5,472	845	664	1,427	775	917	0
20 WOODS HOLE OCNGRPHIC INST	13,370	2,867	0	9,232	0	1,271	0	0	0
TOTAL 1ST 20 INSTS.	643,944	118,024	93,279	42,170	20,027	313,063	10,673	29,885	16,823
21 BAYLOR COLLEGE OF MED	13,235	0	0	0	0	13,235	0	0	0
22 NORTHWESTERN UNIVERSITY	12,809	1,542	2,015	161	334	5,774	251	448	2,274
23 VANDERBILT UNIVERSITY	11,780	229	676	12	41	10,336	222	264	0
24 GEORGE WASHINGTON UNIV	10,810	1,805	70	176	578	5,925	308	1,730	218
25 SYRACUSE UNIVERSITY	10,233	3,246E	2,174E	0	610	900	190	1,230	1,883
26 ROCKEFELLER UNIVERSITY	9,379	0	517	0	0	7,447	1,415	0	0
27 CARNEGIE-MELLON UNIV	8,783	2,276	2,900	0	2,031	337	410	702	127
28 BROWN UNIVERSITY	8,537	1,947	1,519	546	1,246	2,179	391	373	336
29 BOSTON UNIVERSITY	8,407	86	277	0	0	7,392	13	86	553
30 TULANE UNIVERSITY	7,983	301	105	8	242	6,884	186	155	102
TOTAL 1ST 30 INSTS.	745,900	129,456	103,532	43,073	25,109	373,472	14,069	34,873	22,316
31 TEMPLE UNIVERSITY	7,190	55	313	0	19	5,113	208	1,341	141
32 EMORY UNIVERSITY	7,141	0	178	0	10	6,853	80	20	0
33 TUFTS UNIVERSITY	6,393	242	391	0	9	5,340	22	332	57
34 UNIVERSITY OF DAYTON	6,067	3,853	1,406	0	462	336	0	4	6
35 BRANDEIS UNIVERSITY	5,814	0	1,221	0	174	2,096	0	1,684	639
36 UNIVERSITY OF DENVER	5,437	2,270	1,097	23	180	149	250	1,403	65
37 GEORGETOWN UNIVERSITY	5,026	0	610	0	29	3,920	28	121	318
38 RICE UNIVERSITY	4,971	1,421	2,128	264	338	415	10	395	0
39 RENSSELAER POLY INST	4,796E	2,990E	1,276E	90E	250E	190E	0	0	0
40 ST LOUIS UNIV	4,771	302	59	270	0	3,852E	14	1	273
TOTAL 1ST 40 INSTS.	803,506	140,589	112,211	43,720	26,580	401,736	14,681	40,174	23,815
41 DARTMOUTH COLLEGE	4,501	435	274	254	138	2,986	196	50	168

			NEERING	SCIENCES	MENTAL	MATICS	SCIENCES	PSYCHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
	UNITED STATES, TOTAL	898,938	154,659	127,277	47,285	29,522	442,558	21,138	49,062	27,437
1	MASS INST OF TECHNOLOGY	112,652	68,674	19,204	4,326	7,988	8,900	860	2,453	247
2	STANFORD UNIVERSITY	50,751	9,047	8,272	2,589	3,315	21,033	631	5,175	689
3	HARVARD UNIVERSITY	47,765	630	8,089	4,280	491	29,040	558	4,593	84
4	COLUMBIA UNIV MAIN DIV	46,362	1,690	4,281	8,618	418	21,248	260	2,481	7,366
5	UNIVERSITY OF CHICAGO	37,930	0	8,321	1,620	1,064	23,639	572	2,714	0
6	JOHNS HOPKINS UNIVERSITY	35,416	863	2,181	1,286	160	30,004	290	536	96
7	CORNELL UNIVERSITY	32,273	5,299	8,425	272	849	15,625	154	1,588	61
8	UNIV OF PENNSYLVANIA	31,388	2,028	3,954	67	247	18,379	489	2,290	3,934
9	UNIVERSITY OF ROCHESTER	30,135	1,216	3,756	158	234	21,210	1,779	536	1,246
10	YALE UNIVERSITY	29,697	1,383	4,503	848	420	20,056	1,020	1,467	0
	TOTAL 1ST 10 INSTS.	454,369	90,830	70,986	24,064	15,186	209,134	6,613	23,833	13,723
11	NEW YORK UNIVERSITY	27,081	2,188	2,193	679	2,911	16,858	834	1,399	19
12	WASHINGTON UNIV ST LOUIS	22,666	3,112	1,240	6	109	14,909	148	300	2,842
13	UNIV OF STHRN CALIFORNIA	21,855	6,154	759	1,348	130	11,364	482	1,618	0
14	YESHIVA UNIVERSITY	21,571	0	1,174	0	392	18,957	1,048	0	0
15	DUKE UNIVERSITY	19,296	606	2,050	0	225	15,544	534	318	19
16	UNIVERSITY OF MIAMI	18,237	983	680	2,945	25	12,587	136	812	69
17	CALIFORNIA INST OF TECH	16,603	3,532	6,746	2,813	219	2,843	0	299	151
18	CASE WESTERN RESERVE UNIV	15,154	4,110	1,979	238	166	8,169	103	389	0
19	PRINCETON UNIVERSITY	13,742	3,642	5,472	845	664	1,427	775	917	0
20	WOODS HOLE OCNGRPHIC INST	13,370	2,867	0	9,232	0	1,271	0	0	0
	TOTAL 1ST 20 INSTS.	643,944	118,024	93,279	42,170	20,027	313,063	10,673	29,885	16,823
21	BAYLOR COLLEGE OF MED	13,235	0	0	0	0	13,235	0	0	0
22	NORTHWESTERN UNIVERSITY	12,809	1,542	2,015	161	334	5,774	261	448	2,274
23	VANDERBILT UNIVERSITY	11,780	229	676	12	41	10,336	222	264	0
24	GEORGE WASHINGTON UNIV	10,810	1,805	70	176	578	5,925	308	1,730	218
25	SYRACUSE UNIVERSITY	10,233	3,246E	2,174E	0	610	900	190	1,230	1,883
26	ROCKEFELLER UNIVERSITY	9,379	0	517	0	0	7,447	1,415	0	0
27	CARNEGIE-MELLON UNIV	8,783	2,276	2,900	0	2,031	337	410	702	127
28	BROWN UNIVERSITY	8,537	1,987	1,519	546	1,246	2,179	391	373	336
29	BOSTON UNIVERSITY	8,407	86	277	0	0	7,392	13	86	553
30	TULANE UNIVERSITY	7,983	301	105	8	242	6,884	186	155	102
	TOTAL 1ST 30 INSTS.	745,900	129,456	103,532	43,073	25,109	373,472	14,069	34,873	22,316
31	TEMPLE UNIVERSITY	7,190	55	313	0	19	5,113	208	1,341	141
32	EMORY UNIVERSITY	7,141	0	178	0	10	6,853	80	20	0
33	TUFTS UNIVERSITY	6,393	242	391	0	9	5,340	22	332	57
34	UNIVERSITY OF DAYTON	6,067	3,853	1,406	0	462	336	0	4	6
35	BRANDEIS UNIVERSITY	5,814	0	1,221	0	174	2,096	0	1,684	639
36	UNIVERSITY OF DENVER	5,437	2,270	1,097	23	180	149	250	1,403	65
37	GEORGETOWN UNIVERSITY	5,026	0	610	0	29	3,920	28	121	318
38	RICE UNIVERSITY	4,971	1,421	2,128	264	338	415	10	395	0
39	RENSSELAER POLY INST	4,796E	2,990E	1,276E	90E	250E	190E	0	0	0
40	ST LOUIS UNIV	4,771	302	59	270	0	3,852E	14	1	273
	TOTAL 1ST 40 INSTS.	803,506	140,589	112,211	43,720	26,580	401,736	14,681	40,174	23,815
41	DARTMOUTH COLLEGE	4,501	435	274	254	138	2,986	196	50	168
42	UNIVERSITY OF NOTRE DAME	4,096	764	2,273	0	128	874	34	23	0
43	THOM JEFFERSON UNIV HOSP	3,873	0	0	0	0	3,873	0	0	0
44	NEW YORK MEDICAL COLLEGE	3,550	0	0	0	0	3,550	0	0	0
45	THE MED COLL OF WISCONSIN	3,372	0	0	0	0	3,372	0	0	0
46	LEHIGH UNIVERSITY	3,274	1,725	395	314	462	54	25	10	289
47	WAKE FOREST UNIVERSITY	3,180E	0	55	0	14	2,849E	49	196E	17E
48	GEO PEABODY COL TEACHERS	3,162	0	0	0	11	0	2,409	0	742
49	ALBANY MED COL OF UNION U	3,127	0	0	0	0	3,127	0	0	0
50	POLYTECHNIC INST OF N Y	3,012	2,468	432	0	50	0	0	0	62
	TOTAL 1ST 50 INSTS.	838,653	145,981	115,640	44,288	27,383	422,421	17,394	40,453	25,093

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-29.
CONTINUED

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN PRIVATE UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 HOWARD UNIVERSITY	2,863	93	226	0	0	1,839	32	630	43
52 RUSH MEDICAL COLLEGE	2,792	0	0	0	0	2,383	85	0	324
53 ILLINOIS INST OF TECH	2,571	841	530	85	178	291	141	139	366
54 BOSTON COLLEGE	2,552E	0	597E	187E	901E	65E	4E	395E	403E
55 HAHNEMAN MEDICAL COLLEGE	2,517	0	0	0	0	2,517	0	0	0
56 a/	2,381C	954	601	29	166	170	148	267	46
57 STEVENS INSTITUTE OF TECH	2,220	1,385	835	0	0	0	0	0	0
58 CATHOLIC UNIV OF AMERICA	2,155	1,251	623	0	19	22	128	112	0
59 AMERICAN UNIVERSITY THE	2,112	0	282	0	0	178	141	1,511	0
60 DREXEL UNIVERSITY	1,904E	331I	266I	102I	61I	941I	82I	102I	59I
TOTAL 1ST 60 INSTS.	862,720	150,836	119,600	44,691	28,708	430,827	18,115	83,609	26,334
61 ADELPHI UNIV	1,814	0	85	59	38	752	293	560	27
62 MEHARRY MEDICAL COLLEGE	1,790E	0	0	0	0	1,790E	0	0	0
63 ANTIOCH COLLEGE	1,575E	97I	432I	88I	24I	250I	139I	473I	72I
64 SOUTHERN METHODIST UNIV	1,518	503	0	478	77	7	5	445	3
65 BRIGHAM YOUNG UNIVERSITY	1,368E	195E	527E	22E	125E	254E	53E	192E	0
66 TUSKEGEE INSTITUTE	1,349E	82I	370I	75I	21I	214I	120I	405I	62I
67 LOYOLA UNIVERSITY	1,175	0	13	0	0	1,075	17	70	0
68 WENTWORTH INSTITUTE	1,082	37	0	1,045	0	0	0	0	0
69 THE MED COLL OF PENNA	1,081	0	0	0	0	1,081	0	0	0
70 NOVA UNIVERSITY	910	861	0	0	0	6	0	43	0
TOTAL 1ST 70 INSTS.	876,382	152,611	121,027	46,458	28,993	436,256	18,742	85,797	26,498
71 TEXAS CHRISTIAN UNIV	866	0	64	0	0	0	715	65	22
72 CLARKSON COL OF TECH	855	405	381	0	50	0	0	19	0
73 WESLEYAN UNIVERSITY	777	0	253	22	19	365	8	37	73
74 UNIVERSITY OF SANTA CLARA	773	282	141	0	69	18	34	82	147
75 TRINITY UNIVERSITY	734	18	68	51	13	22	31	518	13
76 AMHERST COLLEGE	695	0	325	12	0	344	11	3	0
77 LOMA LINDA UNIVERSITY	638	0	0	0	19	619	0	0	0
78 FORDHAM UNIVERSITY	636	0	216	0	10	17	133	259	1
79 SETON HALL UNIVERSITY	600	0	150	0	30	130	0	290	0
80 GALLAUDET COLLEGE	584	0	200	0	0	0	71	313	0
TOTAL 1ST 80 INSTS.	883,540	153,316	122,825	46,543	29,203	437,771	19,745	87,383	26,754
81 U HLTH SCI/CHCGO MED SCH	494	0	0	0	0	494	0	0	0
82 MARQUETTE UNIVERSITY	480	133	23	27	0	279	0	18	0
83 WORCESTER POLY INSTITUTE	467	373	94	0	0	0	0	0	0
84 CLARK UNIVERSITY	446	0	101	79	8	96	161	1	0
85 UNIV OF SAN FRANCISCO	431E	27I	118I	24I	6I	68I	38I	130I	20I
86 BRYN MAWR COLLEGE	415	0	42	2	0	132	105	134	0
87 FLORIDA INST OF TECH	396	34	1	153	0	208	0	0	0
88 DUQUESNE UNIVERSITY	395	0	91	0	0	263	0	5	36
89 HAVERFORD COLLEGE	384	0	51	0	3	296	0	25	9
90 UNIVERSITY OF THE PACIFIC	381E	0	40E	8E	14E	297E	1E	0	21E
TOTAL 1ST 90 INSTS.	887,829	153,883	123,386	46,836	29,234	439,904	20,050	87,696	26,840
91 EMMANUEL COLLEGE	377	0	377	0	0	0	0	0	0
92 CREIGHTON UNIVERSITY	358	0	0	0	0	358	0	0	0
93 FAIRFIELD UNIVERSITY	329	0	174	0	0	0	0	155	0
94 LONG ISLAND UNIVERSITY	328E	20I	90I	19I	5I	51I	29I	99I	15I
95 MANHATTAN COLLEGE	305	204	14	0	6	72	9	0	0
96 REED COLLEGE	285	0	123	0	4	133	23	1	1
97 COLORADO SCHOOL OF MINES	282	0	0	0	0	0	261	21	0

55 HAHNEMANN MEDICAL COLLEGE	2,517	0	0	0	0	2,517	0	0	0
56 a/	2,381C	954	601	29	166	170	188	267	46
57 STEVENS INSTITUTE OF TECH	2,220	1,385	835	0	0	0	0	0	0
58 CATHOLIC UNIV OF AMERICA	2,155	1,251	623	0	19	22	128	112	0
59 AMERICAN UNIVERSITY THE	2,112	0	282	0	0	178	141	1,511	0
60 DREXEL UNIVERSITY	1,904E	331I	266I	102I	61I	94I	42I	102I	59I
TOTAL 1ST 60 INSTS.	862,720	150,836	119,600	44,691	28,708	430,827	18,115	43,609	26,334
61 ADELPHI UNIV	1,814	0	85	59	38	752	293	560	27
62 MEHARRY MEDICAL COLLEGE	1,790E	0	0	0	0	1,790E	0	0	0
63 ANTIOCH COLLEGE	1,575E	97I	432I	88I	24I	250I	139I	473I	72I
64 SOUTHERN METHODIST UNIV	1,518	503	0	478	77	7	5	445	3
65 BRIGHAM YOUNG UNIVERSITY	1,368E	195E	527E	22E	125E	254E	53E	192E	0
66 TUSKEGEE INSTITUTE	1,349E	82I	370I	75I	21I	214I	120I	805I	62I
67 LOYOLA UNIVERSITY	1,175	0	13	0	0	1,075	17	70	0
68 WENTWORTH INSTITUTE	1,082	37	0	1,045	0	0	0	0	0
69 THE MED COLL OF PENNA	1,081	0	0	0	0	1,081	0	0	0
70 NOVA UNIVERSITY	910	861	0	0	0	6	0	43	0
TOTAL 1ST 70 INSTS.	876,382	152,611	121,027	46,458	28,993	436,256	18,782	45,797	26,498
71 TEXAS CHRISTIAN UNIV	866	0	64	0	0	0	715	65	22
72 CLARKSON COL OF TECH	855	405	381	0	50	0	0	19	0
73 WESLEYAN UNIVERSITY	777	0	253	22	19	365	8	37	73
74 UNIVERSITY OF SANTA CLARA	773	282	141	0	69	18	34	82	147
75 TRINITY UNIVERSITY	734	18	68	51	13	22	31	518	13
76 AMHERST COLLEGE	695	0	325	12	0	344	11	3	0
77 LOMA LINDA UNIVERSITY	638	0	0	0	19	619	0	0	0
78 FORDHAM UNIVERSITY	636	0	216	0	10	17	133	259	1
79 SETON HALL UNIVERSITY	600	0	150	0	30	130	0	290	0
80 GALLAUDET COLLEGE	584	0	200	0	0	0	71	313	0
TOTAL 1ST 80 INSTS.	883,540	153,316	122,825	46,583	29,203	437,771	19,785	47,383	26,754
81 U HLTH SCI/CHCGO MED SCH	494	0	0	0	0	494	0	0	0
82 MARQUETTE UNIVERSITY	480	133	23	27	0	279	0	18	0
83 WORCESTER POLY INSTITUTE	467	373	94	0	0	0	0	0	0
84 CLARK UNIVERSITY	446	0	101	79	8	96	161	1	0
85 UNIV OF SAN FRANCISCO	431E	27I	118I	24I	6I	68I	38I	130I	20I
86 BRYN MAWR COLLEGE	415	0	42	2	0	132	105	134	0
87 FLORIDA INST OF TECH	396	34	1	153	0	208	0	0	0
88 DUQUESNE UNIVERSITY	395	0	91	0	0	263	0	5	36
89 HAVERFORD COLLEGE	384	0	51	0	3	296	0	25	9
90 UNIVERSITY OF THE PACIFIC	381E	0	40E	8E	14E	297E	1E	0	21E
TOTAL 1ST 90 INSTS.	887,829	153,883	123,386	46,836	29,234	439,904	20,050	47,696	26,840
91 EMMANUEL COLLEGE	377	0	377	0	0	0	0	0	0
92 CREIGHTON UNIVERSITY	358	0	0	0	0	358	0	0	0
93 FAIRFIELD UNIVERSITY	329	0	174	0	0	0	0	155	0
94 LONG ISLAND UNIVERSITY	328E	20I	90I	19I	5I	51I	29I	99I	15I
95 MANHATTAN COLLEGE	305	204	14	0	6	72	9	0	0
96 REED COLLEGE	285	0	123	0	4	133	23	1	1
97 COLUMBIA UNIV TCHRS COL	282	0	0	0	0	0	261	21	0
98 REGIS COLLEGE	273	0	273	0	0	0	0	0	0
99 WILLIAMS COLLEGE	260	0	87	0	0	31	40	26	76
100 FRANKLIN & MARSHALL COL	252	0	14	133	14	48	29	11	3
TOTAL 1ST 100 INSTS.	890,878	154,107	124,538	46,988	29,263	440,597	20,441	48,009	26,935
a/ CONFIDENTAL									
ALL OTHER INSTITUTIONS	8,060	552	2,739	297	259	1,961	697	1,053	502

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-30. TOTAL SEPARATELY BUDGETED AND FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS BY INSTITUTION AND LIFE SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL LIFE SCIENCES				FEDERALLY FINANCED LIFE SCIENCES			
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER
UNITED STATES, TOTAL	1,517,994	797,206	642,661	78,127	1,012,830	483,252	487,712	41,866
1 CORNELL UNIVERSITY	35,537	23,888	11,649	0	15,625	8,974	6,651	0
2 UNIVERSITY OF WASHINGTON	34,940	14,120	20,209	611	30,712	12,301	17,802	609
3 UNIVERSITY OF CHICAGO	34,427	12,748	21,679	0	23,639	9,562	14,077	0
4 UNIVERSITY OF MINNESOTA	33,946	15,905	15,836	2,205	18,545	6,296	10,469	1,780
5 JOHNS HOPKINS UNIVERSITY	33,895	9,091	24,739	65	30,004	8,275	21,715	14
6 HARVARD UNIVERSITY	33,295	14,428	18,867	0	29,040	13,119	15,921	0
7 UNIV OF WISCONSIN-MADISON	31,284	14,165	13,600	3,519	16,888	7,307	8,408	1,173
8 U OF CAL LOS ANGELES	30,570	17,333	13,237	0	26,072	15,420	10,652	0
9 U OF CAL SAN FRANCISCO	29,023	8,295	20,728	0	23,956	6,514	17,442	0
10 COLUMBIA UNIV MAIN DIV	27,745	9,445	14,215	4,085	21,248	8,103	9,986	3,159
TOTAL 1ST 10 INSTS.	324,662	139,418	174,759	10,485	235,729	95,871	133,123	6,735
11 U OF CAL DAVIS	27,271	24,135	3,125	11	14,781	12,121	2,649	11
12 U OF CAL SAN DIEGO	27,043	14,681	12,362	0	22,224	11,308	10,916	0
13 UNIVERSITY OF MICHIGAN	26,455	10,023	16,432	0	17,684	7,208	10,476	0
14 UNIVERSITY OF ROCHESTER	26,016	10,150	14,307	1,559	21,210	8,821	11,052	1,337
15 NEW YORK UNIVERSITY	24,994	5,885	19,109	0	16,858	4,021	12,837	0
16 UNIV OF PENNSYLVANIA	24,767	1,927	21,056	1,784	18,379	1,822	15,528	1,029
17 U OF CAL BERKELEY	23,804	21,293	2,511	0	17,420	15,155	2,265	0
18 YALE UNIVERSITY	23,469	6,439	16,639	391	20,056	5,889	13,987	180
19 STANFORD UNIVERSITY	22,989	7,105	15,884	0	21,033	6,670	14,363	0
20 YESHIVA UNIVERSITY	22,302	16,727	5,575	0	18,957	14,218	4,739	0
TOTAL 1ST 20 INSTS.	573,772	257,783	301,759	14,230	424,331	183,104	231,935	9,292
21 ROCKEFELLER UNIVERSITY	19,895	18,752	1,143	0	7,447	7,447	0	0
22 UNIVERSITY OF FLORIDA	19,314	13,483	5,831	0	6,375	1,835	4,540	0
23 MICHIGAN STATE UNIVERSITY	18,847	13,392	3,819	1,636	10,833	7,084	2,797	952
24 UNIVERSITY OF MIAMI	18,481	5,944	9,395	3,142	12,587	4,050	6,392	2,145
25 UNIV OF MISSOURI COLUMBIA	18,318	13,217	5,101	0	6,201	3,427	2,774	0
26 DUKE UNIVERSITY	17,357	7,355	10,002	0	15,544	7,049	8,495	0
27 WASHINGTON UNIV ST LOUIS	16,808	6,308	8,818	1,682	14,909	5,597	7,953	1,359
28 N C STATE UNIV AT RALEIGH	16,620	16,620	0	0	6,430	6,430	0	0
29 TEXAS A & M UNIVERSITY	15,995	475	931	14,589	5,135	181	764	4,190
30 UNIVERSITY OF GEORGIA	15,549	13,697	1,852	0	6,975	6,249	726	0
TOTAL 1ST 30 INSTS.	750,956	367,026	348,651	35,279	516,767	232,453	266,376	17,938
31 OHIO STATE UNIVERSITY	15,233	8,122	6,760	351	7,584	2,213	5,194	177
32 BAYLOR COLLEGE OF MED	15,134	7,081	8,053	0	13,235	6,317	6,918	0
33 UNIVERSITY OF COLORADO	14,330	6,721	6,882	727	11,042	5,112	5,387	543
34 UNIV OF NC AT CHAPEL HILL	14,187	7,008	7,179	0	12,156	6,126	6,030	0
35 UNIV OF SthRN CALIFORNIA	13,758	5,453	6,878	1,427	11,364	4,662	5,296	1,406
36 UNIVERSITY OF UTAH	13,559	6,888	4,504	2,167	12,175	5,935	4,226	2,014
37 PURDUE UNIV ALL CAMPUSES	13,216	11,161	1,956	99	6,232	5,320	870	42
38 OREGON STATE UNIVERSITY	11,849	11,327	423	99	5,172	4,886	187	99
39 CUNY MT SINAI SCH OF MED	11,785	5,068	6,717	0	8,055	3,464	4,591	0
40 VANDERBILT UNIVERSITY	11,759	5,708	6,051	0	10,336	5,074	5,262	0

1 CORNELL UNIVERSITY	35,537	23,888	11,649	0	15,625	8,974	6,651	0
2 UNIVERSITY OF WASHINGTON	34,940	14,120	20,209	611	30,712	12,301	17,802	609
3 UNIVERSITY OF CHICAGO	34,427	12,748	21,679	0	23,639	9,562	14,077	0
4 UNIVERSITY OF MINNESOTA	33,946	15,905	15,836	2,205	18,545	6,296	10,469	1,780
5 JOHNS HOPKINS UNIVERSITY	33,895	9,091	24,739	65	30,004	8,275	21,715	14
6 HARVARD UNIVERSITY	33,295	14,428	18,867	0	29,040	13,119	15,921	0
7 UNIV OF WISCONSIN-MADISON	31,284	14,165	13,600	3,519	16,888	7,307	8,408	1,173
8 U OF CAL LOS ANGELES	30,570	17,333	13,237	0	26,072	15,420	10,652	0
9 U OF CAL SAN FRANCISCO	29,023	8,295	20,728	0	23,956	6,514	17,442	0
10 COLUMBIA UNIV MAIN DIV	27,745	9,445	14,215	4,085	21,248	8,103	9,986	3,159
TOTAL 1ST 10 INSTS.	324,662	139,418	174,759	10,485	235,729	95,871	133,123	6,735
11 U OF CAL DAVIS	27,271	24,135	3,125	11	14,781	12,121	2,649	11
12 U OF CAL SAN DIEGO	27,043	14,681	12,362	0	22,224	11,308	10,916	0
13 UNIVERSITY OF MICHIGAN	26,455	10,023	16,432	0	17,684	7,208	10,476	0
14 UNIVERSITY OF ROCHESTER	26,016	10,150	14,307	1,559	21,210	8,821	11,052	1,337
15 NEW YORK UNIVERSITY	24,994	5,885	19,109	0	16,858	4,021	12,837	0
16 UNIV OF PENNSYLVANIA	24,767	1,927	21,056	1,784	18,379	1,822	15,528	1,029
17 U OF CAL BERKELEY	23,804	21,293	2,511	0	17,420	15,155	2,265	0
18 YALE UNIVERSITY	23,469	6,439	16,639	391	20,056	5,889	13,987	180
19 STANFORD UNIVERSITY	22,989	7,105	15,884	0	21,033	6,670	14,363	0
20 YESHIVA UNIVERSITY	22,302	16,727	5,575	0	18,957	14,218	4,739	0
TOTAL 1ST 20 INSTS.	573,772	257,783	301,759	14,230	424,331	183,104	231,935	9,292
21 ROCKEFELLER UNIVERSITY	19,895	16,752	1,143	0	7,447	7,447	0	0
22 UNIVERSITY OF FLORIDA	19,314	13,483	5,831	0	6,375	1,835	4,540	0
23 MICHIGAN STATE UNIVERSITY	18,847	13,392	3,819	1,636	10,833	7,084	2,797	952
24 UNIVERSITY OF MIAMI	18,481	5,944	9,395	3,142	12,587	4,050	6,392	2,145
25 UNIV OF MISSOURI COLUMBIA	18,318	13,217	5,101	0	6,201	3,427	2,774	0
26 DUKE UNIVERSITY	17,357	7,355	10,002	0	15,544	7,049	8,495	0
27 WASHINGTON UNIV ST LOUIS	16,808	6,308	8,818	1,682	14,909	5,597	7,953	1,359
28 N C STATE UNIV AT RALEIGH	16,620	16,620	0	0	6,430	6,430	0	0
29 TEXAS A & M UNIVERSITY	15,995	475	931	14,589	5,135	181	764	4,190
30 UNIVERSITY OF GEORGIA	15,549	13,697	1,852	0	6,975	6,249	726	0
TOTAL 1ST 30 INSTS.	750,956	367,026	348,651	35,279	516,767	232,453	266,376	17,938
31 OHIO STATE UNIVERSITY	15,233	8,122	6,760	351	7,584	2,213	5,194	177
32 BAYLOR COLLEGE OF MED	15,134	7,081	8,053	0	13,235	6,317	6,918	0
33 UNIVERSITY OF COLORADO	14,330	6,721	6,882	727	11,042	5,112	5,387	543
34 UNIV OF NC AT CHAPEL HILL	14,187	7,008	7,179	0	12,156	6,126	6,030	0
35 UNIV OF SOUTHERN CALIFORNIA	13,758	5,453	6,878	1,427	11,364	4,662	5,296	1,406
36 UNIVERSITY OF UTAH	13,559	6,888	4,504	2,167	12,175	5,935	4,226	2,014
37 PURDUE UNIV ALL CAMPUSES	13,216	11,161	1,956	99	6,232	5,320	870	42
38 OREGON STATE UNIVERSITY	11,849	11,327	423	99	5,172	4,886	187	99
39 CUNY MT SINAI SCH OF MED	11,785	5,068	6,717	0	8,055	3,464	4,591	0
40 VANDERBILT UNIVERSITY	11,759	5,708	6,051	0	10,336	5,074	5,262	0
TOTAL 1ST 40 INSTS.	885,766	441,563	404,054	40,149	614,118	281,562	310,337	22,219
41 UNIV ALABAMA BIRMINGHAM	11,510	0	9,782	1,728	10,687	0	9,132	1,555
42 UNIVERSITY OF ARIZONA	11,302	7,485	3,817	0	5,220	2,339	2,881	0
43 TULANE UNIVERSITY	10,756	3,863	4,470	2,423	6,884	3,340	2,532	1,012
44 U OF TEX M D ANDERSON HOS	10,620	2,441	8,179	0	6,716	1,108	5,608	0
45 LA ST U BATON ROUGE	10,524	557	0	9,967	1,565	408	0	1,157
46 UNIVERSITY OF PITTSBURGH	10,520	4,220	4,267	2,033	8,990	3,701	3,407	1,882
47 UNIVERSITY OF HAWAII	10,464	9,989	272	203	5,938	5,464	269	203
48 UNIV ILLINOIS URBANA	10,393	9,367	1,026	0	4,679	3,965	714	0
49 PENNSYLVANIA STATE UNIV	10,191E	8,144E	1,148E	899	6,471E	5,819E	546E	106
50 MASS INST OF TECHNOLOGY	10,105	6,754	1,351	0	8,900	7,797	1,103	0
TOTAL 1ST 50 INSTS.	992,151	496,383	438,366	57,402	680,168	315,505	336,529	28,134

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-30, CONTINUED

TOTAL SEPARATELY BUDGETED AND FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS BY INSTITUTION AND LIFE SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL LIFE SCIENCES				FEDERALLY FINANCED LIFE SCIENCES			
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER
51 UNIVERSITY OF CONNECTICUT	10,076	8,353	1,711	12	4,998	3,935	1,056	7
52 UNIV OF NEBRASKA - LNCLN	9,918	9,860	58	0	2,528	2,497	31	0
53 UNIVERSITY OF IOWA	9,901	3,739	6,162	0	8,796	3,496	5,300	0
54 CASE WESTERN RESERVE UNIV	9,826	3,421	6,405	0	8,169	2,876	5,293	0
55 INDIANA UNIVERSITY-PURDUE	9,682	833	8,849	0	6,436	646	5,790	0
56 SUNY UPSTATE MEDICAL CTR	9,383	1,613	7,770	0	6,720	1,548	5,172	0
57 IOWA ST U OF SCI & TECH	9,289	8,020	1,269	0	3,327	2,779	548	0
58 WASHINGTON STATE UNIV	9,248	8,281	967	0	1,934	990	944	0
59 RUTGERS THE STATE UNIV	9,196	9,075	121	0	4,281	4,184	97	0
60 COLORADO STATE UNIVERSITY	9,048	6,593	1,479	976	5,964	3,747	1,335	882
TOTAL 1ST 60 INSTS.	1,087,718	556,171	473,157	58,390	733,321	362,203	362,095	29,023
61 UNIVERSITY OF CINCINNATI	9,013	1,974	7,039	0	4,802	915	3,887	0
62 UNIVERSITY OF KANSAS	9,010	3,316	3,059	2,635	8,253	2,943	2,842	2,468
63 MISSISSIPPI STATE UNIV	8,979	8,979	0	0	3,117	3,117	0	0
64 TEMPLE UNIVERSITY	8,891	420	8,471	0	5,113	247	4,866	0
65 KANSAS ST UNIVERSITY	8,569	8,462	107	0	3,452	3,443	9	0
66 U OF CAL RIVERSIDE	8,544	8,544	0	0	1,700	1,700	0	0
67 UNIV OF KENTUCKY ALL CAM	8,481	4,448	2,609	1,424	3,966	2,394	1,471	101
68 NORTHWESTERN UNIVERSITY	8,186	3,133	4,891	162	5,774	2,365	3,280	129
69 BOSTON UNIVERSITY	8,067	365	7,702	0	7,392	314	7,078	0
70 EMORY UNIVERSITY	7,785	1,522	4,438	1,825	6,853	1,490	3,573	1,790
TOTAL 1ST 70 INSTS.	1,173,243	597,334	511,473	64,436	783,743	361,151	389,081	33,511
71 VIRGINIA POLYTECHNIC INST	7,086	6,844	0	242	2,343	2,342	0	1
72 U TENN MED UNITS MEMPHIS	7,081	1,296	5,785	0	6,001	1,042	4,959	0
73 OKLAHOMA STATE UNIVERSITY	7,031	6,130	606	295	2,603	1,912	501	190
74 VIRGINIA COMMONWLTH UNIV	6,850	2,195	4,655	0	5,282	1,831	3,451	0
75 UNIV OF MD BALTIMORE	6,812	1,427	5,385	0	5,695	1,324	4,371	0
76 GEORGE WASHINGTON UNIV	6,808	1,580	4,049	1,179	5,925	1,298	3,578	1,049
77 ALBANY MED COL OF UNION U	6,598	1,641E	4,957E	0	3,127	774E	2,353E	0
78 AUBURN UNIVERSITY	6,577	6,425	152	0	2,360	2,276	84	0
79 U TEX GALVESTON MED BRAN	6,534	3,628	2,906	0	4,224	1,675	2,549	0
80 U OF ILL MEDICAL CENTER	6,531	2,564	3,967	0	4,308	1,987	2,321	0
TOTAL 1ST 80 INSTS.	1,241,151	631,064	543,935	66,152	825,611	377,612	413,248	34,751
81 U TEX HLTH SCI CTR DALLAS	6,258	2,049	4,010	199	4,941	1,663	3,083	195
82 TUFTS UNIVERSITY	6,216	3,073	3,143	0	5,340	2,746	2,594	0
83 SUNY BUFFALO	6,086	3,051	3,035	0	4,288	2,221	2,067	0
84 U OF OREGON MED SCHOOL	6,036E	1,924E	4,112E	0	4,571E	1,450E	3,121E	0
85 UNIV OF VT & ST AGRIC COL	5,871	2,280	2,210	1,381	3,780	1,382	1,775	623
86 SUNY DOWNSTATE MED CTR	5,568	1,320	4,248	0	4,126	1,109	3,017	0
87 UNIVERSITY OF IDAHO	5,470	5,227	238	5	2,210	2,124	86	0
88 UNIV OF MISSISSIPPI	5,303	2,560	2,743	0	3,451	1,863	1,588	0
89 UNIVERSITY OF ARKANSAS	5,153	5,153	0	0	1,554	1,554	0	0
90 UNIV OF TEXAS AT AUSTIN	5,080	4,949	131	0	3,443	3,343	100	0
TOTAL 1ST 90 INSTS.	1,298,192	662,650	567,805	67,737	863,315	397,067	430,679	35,569
91 THE MED COLL OF WISCONSIN	5,066	1,253E	3,663E	150E	3,372	857E	2,414E	101E
92 GEORGETOWN UNIVERSITY	5,002	311	4,691	0	3,920	228	3,692	0
93 UNIV OF MD COLLEGE PARK	4,991	4,991	0	0	1,828	1,828	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

55	INDIANA UNIVERSITY-PURDUE	9,682	833	8,849	0	6,436	646	5,790	0
56	SUNY UPSTATE MEDICAL CTR	9,383	1,613	7,770	0	6,720	1,548	5,172	0
57	IOWA ST U OF SCI & TECH	9,289	8,020	1,269	0	3,327	2,779	548	0
58	WASHINGTON STATE UNIV	9,248	8,281	967	0	1,934	990	944	0
59	RUTGERS THE STATE UNIV	9,196	9,075	121	0	4,281	4,184	97	0
60	COLORADO STATE UNIVERSITY	9,048	6,593	1,479	976	5,964	3,747	1,335	882
	TOTAL 1ST 60 INSTS.	1,087,718	556,171	473,157	58,390	733,321	342,203	362,095	29,023
61	UNIVERSITY OF CINCINNATI	9,013	1,974	7,039	0	4,802	915	3,887	0
62	UNIVERSITY OF KANSAS	9,010	3,316	3,059	2,635	8,253	2,943	2,842	2,468
63	MISSISSIPPI STATE UNIV	8,979	8,979	0	0	3,117	3,117	0	0
64	TEMPLE UNIVERSITY	8,891	420	8,471	0	5,113	267	4,846	0
65	KANSAS ST UNIVERSITY	8,569	8,462	107	0	3,452	3,443	9	0
66	U OF CAL RIVERSIDE	8,544	8,544	0	0	1,700	1,700	0	0
67	UNIV OF KENTUCKY ALL CAM	8,481	4,448	2,609	1,424	3,966	2,394	1,471	101
68	NORTHWESTERN UNIVERSITY	8,186	3,133	4,891	162	5,774	2,365	3,280	129
69	BOSTON UNIVERSITY	8,067	365	7,702	0	7,392	314	7,078	0
70	EMORY UNIVERSITY	7,785	1,522	4,438	1,825	6,853	1,490	3,573	1,790
	TOTAL 1ST 70 INSTS.	1,173,243	597,334	511,473	64,436	783,743	361,151	389,081	33,511
71	VIRGINIA POLYTECHNIC INST	7,086	6,844	0	242	2,343	2,342	0	1
72	U TENN HEC UNITS MEMPHIS	7,081	1,296	5,785	0	6,001	1,042	4,959	0
73	OKLAHOMA STATE UNIVERSITY	7,031	6,130	606	295	2,603	1,912	501	190
74	VIRGINIA COMMONWLTH UNIV	6,850	2,195	4,655	0	5,282	1,831	3,451	0
75	UNIV OF MD BALTIMORE	6,812	1,427	5,385	0	5,695	1,324	4,371	0
76	GEORGE WASHINGTON UNIV	6,808	1,580	4,049	1,179	5,925	1,298	3,578	1,049
77	ALBANY MED COL OF UNION U	6,598	1,641E	4,957E	0	3,127	774E	2,353E	0
78	AUBURN UNIVERSITY	6,577	6,425	152	0	2,360	2,276	84	0
79	U TEX GALVESTON MED BRAN	6,534	3,628	2,906	0	4,224	1,675	2,549	0
80	U OF ILL MEDICAL CENTER	6,531	2,564	3,967	0	4,308	1,987	2,321	0
	TOTAL 1ST 80 INSTS.	1,241,151	631,064	543,935	66,152	825,611	377,612	413,248	34,751
81	U TEX HLTH SCI CTR DALLAS	6,258	2,049	4,010	199	4,941	1,663	3,083	195
82	TUFTS UNIVERSITY	6,216	3,073	3,143	0	5,340	2,746	2,594	0
83	SUNY BUFFALO	6,086	3,051	3,035	0	4,288	2,221	2,067	0
84	U OF OREGON MED SCHOOL	6,036E	1,924E	4,112E	0	4,571E	1,450E	3,121E	0
85	UNIV OF VT & ST AGRIC COL	5,871	2,280	2,210	1,381	3,780	1,382	1,775	623
86	SUNY DOWNSTATE MED CTR	5,568	1,320	4,248	0	4,126	1,109	3,017	0
87	UNIVERSITY OF IDAHO	5,470	5,227	238	5	2,210	2,124	86	0
88	UNIV OF MISSISSIPPI	5,303	2,560	2,743	0	3,451	1,863	1,588	0
89	UNIVERSITY OF ARKANSAS	5,153	5,153	0	0	1,554	1,554	0	0
90	UNIV OF TEXAS AT AUSTIN	5,080	4,949	131	0	3,443	3,343	100	0
	TOTAL 1ST 90 INSTS.	1,298,192	662,650	567,805	67,737	863,315	397,067	430,679	35,569
91	THE MED COLL OF WISCONSIN	5,066	1,253E	3,663E	150E	3,372	857E	2,414E	101E
92	GEORGETOWN UNIVERSITY	5,002	311	4,691	0	3,920	228	3,692	0
93	UNIV OF MD COLLEGE PARK	4,991	4,991	0	0	1,828	1,828	0	0
94	CLEMSON UNIVERSITY	4,941	4,813	0	128	1,321	1,321	0	0
95	UNIVERSITY OF VIRGINIA	4,867	2,528	2,339	0	3,463	2,005	1,458	0
96	THOM JEFFERSON UNIV HOSP	4,847	1,309	3,538	0	3,873	1,046	2,827	0
97	NORTH DAKOTA STATE UNIV	4,835	4,835	0	0	1,224	1,224	0	0
98	NEW YORK MEDICAL COLLEGE	4,615	1,634	2,981	0	3,550	1,229	2,321	0
99	ST LOUIS UNIV	4,549	3,376	938	235	3,852E	3,145	611	96E
100	WEST VIRGINIA UNIVERSITY	4,440	2,237	1,764	439	3,368	1,283	1,711	374
	TOTAL 1ST 100 INSTS.	1,346,345	689,937	587,719	68,689	893,086	411,233	445,713	36,140
	ALL OTHER INSTITUTIONS	171,649	107,269	54,942	9,438	119,744	72,019	41,999	5,726

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-31.

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SELECTED SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	PHYSICAL SCIENCES					MATHEMATICAL SCIENCES		
	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER	TOTAL	MATH (NON COMPUTER SCIENCE)	COMPUTER SCIENCE
UNITED STATES, TOTAL	340,954	24,128	115,091	171,267	30,468	74,683	35,827	38,856
1 MASS INST OF TECHNOLOGY	21,084	1,320	3,023	15,806	935	8,681	1,025	7,656
2 UNIV OF WISCONSIN-MADISON	10,142	1,045	4,460	3,946	691	3,216	2,798	418
3 CORNELL UNIVERSITY	9,742	926	2,515	5,512	789	909	470	439
4 U OF CAL SAN DIEGO	9,731	0	2,561	5,344	1,826	335	200	135
5 U OF CAL BERKELEY	9,545	1,146	2,041	1,287	5,071	1,558	1,329	229
6 UNIVERSITY OF CHICAGO	9,070	259	3,396	4,264	1,151	1,095	567	528
7 STANFORD UNIVERSITY	8,524	0	1,693	6,831	0	3,339	752	2,587
8 HARVARD UNIVERSITY	8,501	1,945	2,241	4,315	0	601	526	75
9 UNIVERSITY OF COLORADO	7,663	601	911	5,475	676	787	187	600
10 UNIVERSITY OF ARIZONA	7,537	2,179	1,079	4,279	0	147	113	34
TOTAL 1ST 10 INSTS.	101,539	9,421	23,920	57,059	11,139	20,668	7,967	12,701
11 CALIFORNIA INST OF TECH	7,185	933	2,307	3,945	0	223	223	0
12 UNIV OF MD COLLEGE PARK	6,692	0	1,594	5,098	0	1,962	172	1,790
13 UNIV OF TEXAS AT AUSTIN	6,639	2,185	1,030	3,424	0	1,385	304	1,081
14 PRINCETON UNIVERSITY	6,546	1,946	1,440	3,160	0	992	992	0
15 CARNEGIE-MELLON UNIV	6,450	0	4,843	1,607	0	2,047	355	1,692
16 UNIV ILLINOIS URBANA	5,631	188	2,717	2,687	39	3,632	493	3,139
17 UNIVERSITY OF ALASKA	4,984	0	16	1,073	3,895	2	2	0
18 YALE UNIVERSITY	4,741	149	1,529	3,063	0	440	366	74
19 COLUMBIA UNIV MAIN DIV	4,525	237	1,663	2,625	0	441	441	0
20 U OF CAL LOS ANGELES	4,447	153	2,073	2,221	0	1,614	477	1,137
TOTAL 1ST 20 INSTS.	159,379	15,212	43,132	85,962	15,073	33,406	11,792	21,614
21 UNIVERSITY OF ROCHESTER	4,428	0	1,093	3,335	0	265	265	0
22 UNIVERSITY OF WASHINGTON	4,132	205	653	2,624	650	354	305	49
23 UNIV OF PENNSYLVANIA	4,021	136	808	2,446	631	247	247	0
24 FLORIDA STATE UNIVERSITY	3,959	0	1,240	1,266	1,453	756	369I	387I
25 UNIVERSITY OF MINNESOTA	3,907	0	729	3,178	0	882	839	43
26 INDIANA UNIV-BLOOMINGTON	3,546	37	1,687	1,822	0	434	284	150
27 UNIVERSITY OF IOWA	3,527	0	159	3,368	0	326	224	102
28 TEXAS A & M UNIVERSITY	3,460	0	1,834	565	1,061	41	41	0
29 UNIVERSITY OF HAWAII	3,309	2,458	406	445	0	58	58	0
30 PENNSYLVANIA STATE UNIV	3,269	102	1,274	445	1,448	128	75	53
TOTAL 1ST 30 INSTS.	196,937	18,150	53,015	105,456	20,316	36,897	14,499	22,398
31 U OF NEV DESERT RES INST	3,239	0	0	3,239	0	0	0	0
32 UNIVERSITY OF MICHIGAN	3,159	391	730	2,038	0	1,602	720	882
33 PURDUE UNIV ALL CAMPUSES	3,142	0	1,913	1,229	0	957	535	422
34 UNIVERSITY OF UTAH	3,030	0	1,704	1,326	0	2,177	266	1,911
35 UNIVERSITY OF PITTSBURGH	2,936	3	714	2,219	0	70	44	26
36 MICHIGAN STATE UNIVERSITY	2,929	20	933	1,976	0	567	494	73
37 RUTGERS THE STATE UNIV	2,874	3	657	2,214	0	942	748	194
38 RICE UNIVERSITY	2,747	1,114	866	767	0	350	257	93
39 GEORGIA INSTITUTE OF TECH	2,568	0	1,040	1,528	0	560	101	459
40 UNIVERSITY OF GEORGIA	2,525	0	1,239	1,286	0	737	442	295

1	MASS INST OF TECHNOLOGY	21,084	1,320	3,023	15,806	935	8,681	1,025	7,656
2	UNIV OF WISCONSIN-MADISON	10,142	1,045	4,460	3,946	691	3,216	2,798	418
3	CORNELL UNIVERSITY	9,742	926	2,515	5,512	789	909	470	439
4	U OF CAL SAN DIEGO	9,731	0	2,561	5,344	1,826	335	200	135
5	U OF CAL BERKELEY	9,545	1,146	2,041	1,287	5,071	1,558	1,329	229
6	UNIVERSITY OF CHICAGO	9,070	259	3,396	4,264	1,151	1,095	567	528
7	STANFORD UNIVERSITY	8,524	0	1,693	6,831	0	3,339	752	2,587
8	HARVARD UNIVERSITY	8,501	1,945	2,241	4,315	0	601	526	75
9	UNIVERSITY OF COLORADO	7,663	601	911	5,475	676	787	187	600
10	UNIVERSITY OF ARIZONA	7,537	2,179	1,079	4,279	0	147	113	34
	TOTAL 1ST 10 INSTS.	101,539	9,421	23,920	57,059	11,139	20,668	7,967	12,701
11	CALIFORNIA INST OF TECH	7,185	933	2,307	3,945	0	223	223	0
12	UNIV OF MD COLLEGE PARK	6,692	0	1,594	5,098	0	1,962	172	1,790
13	UNIV OF TEXAS AT AUSTIN	6,639	2,185	1,030	3,424	0	1,385	304	1,081
14	PRINCETON UNIVERSITY	6,546	1,946	1,440	3,160	0	992	992	0
15	CARNEGIE-MELLON UNIV	6,450	0	4,843	1,607	0	2,047	355	1,692
16	UNIV ILLINOIS URBANA	5,631	188	2,717	2,687	39	3,632	493	3,139
17	UNIVERSITY OF ALASKA	4,984	0	16	1,073	3,895	2	2	0
18	YALE UNIVERSITY	4,741	149	1,529	3,063	0	440	366	74
19	COLUMBIA UNIV MAIN DIV	4,525	237	1,663	2,625	0	441	441	0
20	U OF CAL LOS ANGELES	4,447	153	2,073	2,221	0	1,614	477	1,137
	TOTAL 1ST 20 INSTS.	159,379	15,212	43,132	85,962	15,073	33,406	11,792	21,614
21	UNIVERSITY OF ROCHESTER	4,428	0	1,093	3,335	0	265	265	0
22	UNIVERSITY OF WASHINGTON	4,132	205	653	2,624	650	354	305	49
23	UNIV OF PENNSYLVANIA	4,021	136	808	2,446	631	247	247	0
24	FLORIDA STATE UNIVERSITY	3,959	0	1,240	1,266	1,453	756	369I	387I
25	UNIVERSITY OF MINNESOTA	3,907	0	729	3,178	0	882	839	43
26	INDIANA UNIV-BLOOMINGTON	3,546	37	1,687	1,822	0	434	284	150
27	UNIVERSITY OF IOWA	3,527	0	159	3,368	0	326	224	102
28	TEXAS A & M UNIVERSITY	3,460	0	1,834	565	1,061	41	41	0
29	UNIVERSITY OF HAWAII	3,309	2,458	406	445	0	58	58	0
30	PENNSYLVANIA STATE UNIV	3,269	102	1,274	445	1,448	128	75	53
	TOTAL 1ST 30 INSTS.	196,937	18,150	53,015	105,456	20,316	36,897	14,499	22,398
31	U OF NEV DESERT RES INST	3,239	0	0	3,239	0	0	0	0
32	UNIVERSITY OF MICHIGAN	3,159	391	730	2,038	0	1,602	720	882
33	PURDUE UNIV ALL CAMPUSES	3,142	0	1,913	1,229	0	957	535	422
34	UNIVERSITY OF UTAH	3,030	0	1,704	1,326	0	2,177	266	1,911
35	UNIVERSITY OF PITTSBURGH	2,936	3	714	2,219	0	70	44	26
36	MICHIGAN STATE UNIVERSITY	2,929	20	933	1,976	0	567	494	73
37	RUTGERS THE STATE UNIV	2,874	3	657	2,214	0	942	748	194
38	RICE UNIVERSITY	2,747	1,114	866	767	0	350	257	93
39	GEORGIA INSTITUTE OF TECH	2,568	0	1,040	1,528	0	560	101	459
40	UNIVERSITY OF GEORGIA	2,525	0	1,239	1,286	0	737	442	295
	TOTAL 1ST 40 INSTS.	226,086	19,681	62,811	123,278	20,316	44,859	18,106	26,753
41	U OF CAL SANTA CRUZ	2,524	1,239	0	0	1,285	100	0	100
42	SYRACUSE UNIVERSITY	2,405E	0	253E	2,135E	17E	716	119	597
43	UNIVERSITY OF NOTRE DAME	2,342	0	1,540	802	0	128	128	0
44	NEW YORK UNIVERSITY	2,296	0	506	1,790	0	2,988	2,579	409
45	NORTHWESTERN UNIVERSITY	2,258	193	1,511	554	0	343	286	57
46	JOHNS HOPKINS UNIVERSITY	2,232	0	1,038	1,194	0	160	160	0
47	CASE WESTERN RESERVE UNIV	2,146	114	1,152	880	0	166	131	35
48	OHIO STATE UNIVERSITY	2,144	137	1,213	791	3	496	198	298
49	DUKE UNIVERSITY	2,141	0	565	1,576	0	225	65	160
50	SUNY STONY BROOK	2,068	122	692	1,254	0	794	499	295
	TOTAL 1ST 50 INSTS.	248,642	21,486	71,281	134,254	21,621	50,975	22,271	28,704

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-31.
CONTINUED

CURRENT R&D EXPENDITURES, SEPARATELY BUDGETED IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND SELECTED SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	PHYSICAL SCIENCES					MATHEMATICAL SCIENCES		
	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER	TOTAL	MATH (NON COMPUTER SCIENCE)	COMPUTER SCIENCE
51 UNIV OF MASS AT AMHERST	2,013	586	841	586	0	248	60	188
52 LA ST U BATON ROUGE	1,969	0	809	1,139	21	321	132I	189I
53 U PUERTO RICO MAYAGUEZ	1,950	0	36	24	1,890	0	0	0
54 U OF CAL IRVINE	1,832	0	1,125	692	15	168	135	33
55 UNIV OF RHODE ISLAND	1,799E	40E	316E	277E	1,166E	474E	245I	229I
56 VIRGINIA POLYTECHNIC INST	1,757	0	287	330	1,140	301	295	6
57 UNIVERSITY OF VIRGINIA	1,653	116	837	700	0	320	151	169
58 U OF TEX M D ANDERSON HOS	1,645	0	1,065	580	0	999	755	244
59 U OF CAL SANTA BARBARA	1,618	0	566	832	220	702	154	548
60 BROWN UNIVERSITY	1,571	0	566	1,005	0	1,253	1,013	240
TOTAL 1ST 60 INSTS.	266,449	22,228	77,729	140,419	26,073	55,761	25,211	30,550
61 UNIVERSITY OF WYOMING	1,568	0	312	627	629	2	2	0
62 UNIVERSITY OF DAYTON	1,433	0	397	1,036	0	515	123	392
63 U OF CAL RIVERSIDE	1,409	0	755	654	0	245	245	0
64 UNIVERSITY OF OREGON	1,401	0	724	553	124	155	155	0
65 UNIVERSITY OF FLORIDA	1,400	0	576	824	0	586	183	403
66 ROCKEFELLER UNIVERSITY	1,333	0	599	734	0	485	485	0
67 RENSSELAER POLY INST	1,283E	0	968E	315E	0	250E	117I	133I
68 WASHINGTON UNIV ST LOUIS	1,281	0	314	967	0	109	109	0
69 BRANDEIS UNIVERSITY	1,264	0	668	596	0	174	174	0
70 UNIVERSITY OF DENVER	1,240	2	2	1,236	0	203	120	83
TOTAL 1ST 70 INSTS.	280,061	22,230	83,044	147,961	26,826	58,485	26,924	31,561
71 YESHIVA UNIVERSITY	1,174	0	391	783	0	392	183I	209I
72 UNIVERSITY OF KANSAS	1,171	626	522	0	23	370	318	52
73 INSTITUTE PAPER CHEMISTRY	1,123	0	583	237	303	25	15I	10I
74 U OF CAL DAVIS	1,085	0	320	764	1	111	11	100
75 SUNY COL OF ENV SCI & FOR	1,067	0	1,067	0	0	0	0	0
76 UNIV OF NC AT CHAPEL HILL	1,007	0	707	300	0	285	190	95
77 UNIVERSITY OF MIAMI	999	0	360	603	36	38	38	0
78 IOWA ST U OF SCI & TECH	986	0	582	404	0	961	386I	575I
79 UNIVERSITY OF DELAWARE	927	0	614	313	0	51	42	9
80 STEVENS INSTITUTE OF TECH	912	0	361	548	3	0	0	0
TOTAL 1ST 80 INSTS.	290,512	22,856	88,551	151,913	27,192	60,718	28,107	32,611
81 WASHINGTON STATE UNIV	906	0	532	373	1	274	50	224
82 SUNY BUFFALO	871	0	600	269	2	812	592	220
83 WAYNE STATE UNIVERSITY	868	0	699	169	0	60	42	18
84 ARIZONA STATE UNIVERSITY	857	0	613	244	0	51	46	5
85 UNIV OF NEW HAMPSHIRE	834	429	140	265	0	31	21	10
86 a/	815	0	248	567	0	201	201	0
87 OREGON STATE UNIVERSITY	809	0	676	133	0	200	189	11
88 UNIVERSITY OF HOUSTON	804	0	395	409	0	80	80	0
89 UNIV OF STHRN CALIFORNIA	797	0	500	297	0	130	130	0
90 GEORGETOWN UNIVERSITY	788	0	521	267	0	194	194	0
TOTAL 1ST 90 INSTS.	298,861	23,285	93,475	154,906	27,195	62,751	29,652	33,099
91 VANDERBILT UNIVERSITY	780	0	334	446	0	49	46	3
92 OLD DOMINION UNIVERSITY	738	0	240	232	266	26	26	0
93 CATHOLIC UNIV OF AMERICA	725	0	200	525	0	20	6	14
94 UNIV OF NEBRASKA - LINCLN	676	0	417	259	0	20	6	14

56 VIRGINIA POLYTECHNIC INST	1,757	0	287	330	1,140	301	295	6
57 UNIVERSITY OF VIRGINIA	1,653	116	837	700	0	320	151	169
58 U OF TEX M D ANDERSON HOS	1,645	0	1,065	580	0	999	755	244
59 U OF CAL SANTA BARBARA	1,618	0	566	832	220	702	154	548
60 BROWN UNIVERSITY	1,571	0	566	1,005	0	1,253	1,013	240
TOTAL 1ST 60 INSTS.	266,449	22,228	77,729	140,419	26,073	55,761	25,211	30,550
61 UNIVERSITY OF WYOMING	1,568	0	312	627	629	2	2	0
62 UNIVERSITY OF DAYTON	1,433	0	397	1,036	0	515	123	392
63 U OF CAL RIVERSIDE	1,409	0	755	654	0	245	245	0
64 UNIVERSITY OF OREGON	1,401	0	724	553	124	155	155	0
65 UNIVERSITY OF FLORIDA	1,400	0	576	824	0	586	183	403
66 ROCKEFELLER UNIVERSITY	1,333	0	599	734	0	485	485	0
67 RENSSELAER POLY INST	1,283E	0	968E	315E	0	250E	117I	133I
68 WASHINGTON UNIV ST LOUIS	1,281	0	314	967	0	109	109	0
69 BRANDEIS UNIVERSITY	1,264	0	668	596	0	174	174	0
70 UNIVERSITY OF DENVER	1,240	2	2	1,236	0	203	120	83
TOTAL 1ST 70 INSTS.	280,061	22,230	83,044	147,961	26,826	58,485	26,924	31,561
71 YESHIVA UNIVERSITY	1,174	0	391	783	0	392	183I	209I
72 UNIVERSITY OF KANSAS	1,171	626	522	0	23	370	318	52
73 INSTITUTE PAPER CHEMISTRY	1,123	0	583	237	303	25	15I	10I
74 U OF CAL DAVIS	1,085	0	320	764	1	111	11	100
75 SUNY COL OF ENV SCI & FOR	1,067	0	1,067	0	0	0	0	0
76 UNIV OF NC AT CHAPEL HILL	1,007	0	707	300	0	285	190	95
77 UNIVERSITY OF MIAMI	999	0	360	603	36	38	38	0
78 IOWA ST U OF SCI & TECH	986	0	582	404	0	961	386I	575I
79 UNIVERSITY OF DELAWARE	927	0	614	313	0	51	42	9
80 STEVENS INSTITUTE OF TECH	912	0	361	548	3	0	0	0
TOTAL 1ST 80 INSTS.	290,512	22,856	88,551	151,913	27,192	60,718	28,107	32,611
81 WASHINGTON STATE UNIV	906	0	532	373	1	274	50	224
82 SUNY BUFFALO	871	0	600	269	2	812	592	220
83 WAYNE STATE UNIVERSITY	868	0	699	169	0	60	42	18
84 ARIZONA STATE UNIVERSITY	857	0	613	244	0	51	46	5
85 UNIV OF NEW HAMPSHIRE	834	429	140	265	0	31	21	10
86 a/	815	0	248	567	0	201	201	0
87 OREGON STATE UNIVERSITY	809	0	676	133	0	200	189	11
88 UNIVERSITY OF HOUSTON	804	0	395	409	0	80	80	0
89 UNIV OF STHRN CALIFORNIA	797	0	500	297	0	130	130	0
90 GEORGETOWN UNIVERSITY	788	0	521	267	0	194	194	0
TOTAL 1ST 90 INSTS.	298,861	23,285	93,475	154,906	27,195	62,751	29,652	33,099
91 VANDERBILT UNIVERSITY	780	0	334	446	0	49	46	3
92 OLD DOMINION UNIVERSITY	738	0	240	232	266	26	26	0
93 CATHOLIC UNIV OF AMERICA	725	0	200	525	0	20	6	14
94 UNIV OF NEBRASKA - LNCLN	676	0	417	259	0	128	100	28
95 U TENNESSEE KNOXVILLE	672	0	238	434	0	41	41	0
96 KENT STATE UNIVERSITY	664	0	385	279	0	47	47	0
97 BOSTON COLLEGE	646E	0	418E	228E	0	1,002E	480I	522I
98 BRIGHAM YOUNG UNIVERSITY	634E	0	453E	181E	0	145E	70I	75I
99 UNIV OF MISSOURI ROLLA	624	0	188	436	0	200	19	181
100 LEHIGH UNIVERSITY	602	0	66	492	344	523	239	284
TOTAL 1ST 100 INSTS.	305,622	23,285	96,414	158,118	27,805	64,932	30,726	34,206
a/ CONFIDENTAL								
ALL OTHER INSTITUTIONS	35,332	843	18,677	13,149	2,663	9,751	5,101	4,650

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-32.

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES
IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER
OF AMOUNTS BY INSTITUTION AND SELECTED SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	PHYSICAL SCIENCES					MATHEMATICAL SCIENCES		
	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER	TOTAL	MATH (NON COMPUTER SCIENCE)	COMPUTER SCIENCE
UNITED STATES, TOTAL	280,904	17,704	88,098	149,282	25,820	56,308	28,786	27,522
1 MASS INST OF TECHNOLOGY	19,204	72	2,852	15,365	915	7,988	1,012	6,976
2 U OF CAL SAN DIEGO	9,553	0	2,423	5,308	1,822	335	200	135
3 U OF CAL BERKELEY	8,629	908	1,791	1,150	4,780	1,289	1,120	169
4 CORNELL UNIVERSITY	8,425	799	2,234	4,662	730	849	438	411
5 UNIVERSITY OF CHICAGO	8,321	183	3,134	4,007	997	1,064	536	528
6 STANFORD UNIVERSITY	8,272	0	1,599	6,673	0	3,315	751	2,564
7 HARVARD UNIVERSITY	8,089	1,891	2,044	4,154	0	491	491	0
8 UNIVERSITY OF COLORADO	6,911	584	807	5,026	494	538	174	364
9 CALIFORNIA INST OF TECH	6,746	887	2,075	3,784	0	219	219	0
10 UNIV OF MD COLLEGE PARK	6,352	0	1,322	5,030	0	796	172E	624E
TOTAL 1ST 10 INSTS.	90,502	5,324	20,281	55,159	9,738	16,884	5,113	11,771
11 UNIV OF WISCONSIN-MADISON	5,921	712	2,410	2,422	377	1,679	1,427	252
12 PRINCETON UNIVERSITY	5,472	1,783	946	2,743	0	664	664	0
13 UNIVERSITY OF ARIZONA	5,296	948	717	3,631	0	74	46	28
14 UNIV ILLINOIS URBANA	4,829	132	2,376	2,294	27	3,050	445	2,605
15 YALE UNIVERSITY	4,503	146	1,369	2,988	0	420	362	58
16 UNIVERSITY OF ALASKA	4,398	0	6	800	3,592	2	2	0
17 COLUMBIA UNIV MAIN DIV	4,281	209	1,551	2,521	0	418	418	0
18 U OF CAL LOS ANGELES	4,257	143	1,932	2,182	0	1,049	467	582
19 UNIVERSITY OF WASHINGTON	4,022	204	596	2,620	602	305	305	0
20 UNIV OF PENNSYLVANIA	3,954	134	790	2,407	623	247	247	0
TOTAL 1ST 20 INSTS.	137,435	9,735	32,974	79,767	14,959	24,792	9,496	15,296
21 UNIV OF TEXAS AT AUSTIN	3,871	1,333	745	1,793	0	444	179	265
22 UNIVERSITY OF MINNESOTA	3,765	0	671	3,094	0	635	595	40
23 UNIVERSITY OF ROCHESTER	3,756	0	900	2,856	0	234	234	0
24 UNIVERSITY OF IOWA	3,423	0	119	3,304	0	326	224	102
25 FLORIDA STATE UNIVERSITY	3,359	0	1,005	1,122	1,232	533	294I	239I
26 INDIANA UNIV-BLOOMINGTON	3,159	36	1,522	1,601	0	379	277	102
27 CARNEGIE-MELLON UNIV	2,900	0	1,565	1,335	0	2,031	339	1,692
28 PURDUE UNIV ALL CAMPUSES	2,857	0	1,697	1,160	0	768	414	354
29 UNIVERSITY OF MICHIGAN	2,836	390	627	1,819	0	866	568	298
30 UNIVERSITY OF PITTSBURGH	2,828	3	648	2,177	0	69	44	25
TOTAL 1ST 30 INSTS.	170,189	11,497	42,473	100,028	16,191	31,077	12,664	18,413
31 MICHIGAN STATE UNIVERSITY	2,678	20	800	1,858	0	480	417	63
32 PENNSYLVANIA STATE UNIV	2,602	102	985	305	1,210	117	75	42
33 UNIVERSITY OF HAWAII	2,539	1,791	370	378	0	43	43	0
34 UNIVERSITY OF UTAH	2,507	0	1,539	968	0	770	244	526
35 UNIVERSITY OF NOTRE DAME	2,273	0	1,472	801	0	128	128	0
36 U OF NEV DESERT RES INST	2,216	0	0	2,216	0	0	0	0
37 NEW YORK UNIVERSITY	2,193	0	455	1,738	0	2,911	2,507	404
38 JOHNS HOPKINS UNIVERSITY	2,181	0	1,005	1,176	0	160	160	0
39 SYRACUSE UNIVERSITY	2,174E	0	208E	1,950E	16E	610	100	510
40 RICE UNIVERSITY	2,128	1,105	260	763	0	338	245	93

	UNITED STATES, TOTAL	280,904	17,704	88,098	149,282	25,820	56,308	28,786	27,522
1	MASS INST OF TECHNOLOGY	19,204	72	2,852	15,365	915	7,988	1,012	6,976
2	U OF CAL SAN DIEGO	9,553	0	2,423	5,308	1,822	335	200	135
3	U OF CAL BERKELEY	8,629	908	1,791	1,150	4,780	1,289	1,120	169
4	CORNELL UNIVERSITY	8,425	799	2,234	4,662	730	849	438	411
5	UNIVERSITY OF CHICAGO	8,321	183	3,134	4,007	997	1,064	536	528
6	STANFORD UNIVERSITY	8,272	0	1,599	6,673	0	3,315	751	2,564
7	HARVARD UNIVERSITY	8,089	1,891	2,044	4,154	0	491	491	0
8	UNIVERSITY OF COLORADO	6,911	584	807	5,026	494	538	174	364
9	CALIFORNIA INST OF TECH	6,746	887	2,075	3,784	0	219	219	0
10	UNIV OF MD COLLEGE PARK	6,352	0	1,322	5,030	0	796	-172E	624E
	TOTAL 1ST 10 INSTS.	90,502	5,324	20,281	55,159	9,738	16,884	5,113	11,771
11	UNIV OF WISCONSIN-MADISON	5,921	712	2,410	2,422	377	1,679	1,427	252
12	PRINCETON UNIVERSITY	5,472	1,783	986	2,743	0	664	664	0
13	UNIVERSITY OF ARIZONA	5,296	948	717	3,631	0	74	46	28
14	UNIV ILLINOIS URBANA	4,829	132	2,376	2,294	27	3,050	445	2,605
15	YALE UNIVERSITY	4,503	146	1,369	2,988	0	420	362	58
16	UNIVERSITY OF ALASKA	4,398	0	6	800	3,592	2	2	0
17	COLUMBIA UNIV MAIN DIV	4,281	209	1,551	2,521	0	418	418	0
18	U OF CAL LOS ANGELES	4,257	143	1,932	2,182	0	1,049	467	582
19	UNIVERSITY OF WASHINGTON	4,022	204	596	2,620	602	305	305	0
20	UNIV OF PENNSYLVANIA	3,954	134	790	2,407	623	247	247	0
	TOTAL 1ST 20 INSTS.	137,435	9,735	32,974	79,767	14,959	24,792	9,496	15,296
21	UNIV OF TEXAS AT AUSTIN	3,871	1,333	745	1,793	0	444	179	265
22	UNIVERSITY OF MINNESOTA	3,765	0	671	3,094	0	635	595	40
23	UNIVERSITY OF ROCHESTER	3,756	0	900	2,856	0	234	234	0
24	UNIVERSITY OF IOWA	3,423	0	119	3,304	0	326	224	102
25	FLORIDA STATE UNIVERSITY	3,359	0	1,005	1,122	1,232	533	294I	239I
26	INDIANA UNIV-BLOOMINGTON	3,159	36	1,522	1,601	0	379	277	102
27	CARNEGIE-MELLON UNIV	2,900	0	1,565	1,335	0	2,031	339	1,692
28	PURDUE UNIV ALL CAMPUSES	2,857	0	1,697	1,160	0	768	414	354
29	UNIVERSITY OF MICHIGAN	2,836	390	627	1,819	0	866	568	298
30	UNIVERSITY OF PITTSBURGH	2,828	3	648	2,177	0	69	44	25
	TOTAL 1ST 30 INSTS.	170,189	11,497	42,473	100,028	16,191	31,077	12,664	18,413
31	MICHIGAN STATE UNIVERSITY	2,678	20	800	1,858	0	480	417	63
32	PENNSYLVANIA STATE UNIV	2,602	102	985	305	1,210	117	75	42
33	UNIVERSITY OF HAWAII	2,539	1,791	370	378	0	43	43	0
34	UNIVERSITY OF UTAH	2,507	0	1,539	968	0	770	244	526
35	UNIVERSITY OF NOTRE DAME	2,273	0	1,472	801	0	128	128	0
36	U OF NEV DESERT RES INST	2,216	0	0	2,216	0	0	0	0
37	NEW YORK UNIVERSITY	2,193	0	455	1,738	0	2,911	2,507	404
38	JOHNS HOPKINS UNIVERSITY	2,181	0	1,005	1,176	0	160	160	0
39	SYRACUSE UNIVERSITY	2,174E	0	208E	1,950E	16E	610	100	510
40	RICE UNIVERSITY	2,128	1,105	260	763	0	338	245	93
	TOTAL 1ST 40 INSTS.	193,680	14,515	49,567	112,181	17,417	36,634	16,583	20,051
41	OHIO STATE UNIVERSITY	2,078	137	1,150	788	3	492	197	295
42	DUKE UNIVERSITY	2,050	0	486	1,564	0	225	65	160
43	NORTHWESTERN UNIVERSITY	2,015	185	1,352	478	0	334	278	56
44	CASE WESTERN RESERVE UNIV	1,979	114	988	877	0	166	131	35
45	TEXAS A & M UNIVERSITY	1,964	0	1,105	200	659	41	41	0
46	U PUERTO RICO MAYAGUEZ	1,911	0	2	19	1,890	0	0	0
47	SUNY STONY BROOK	1,892	122	578	1,192	0	532	477	55
48	UNIV OF MASS AT AMHERST	1,815	572	671	572	0	245	60	185
49	U OF CAL IRVINE	1,776	0	1,093	683	0	168	135	33
50	RUTGERS THE STATE UNIV	1,716	0	388	1,328	0	734	578	156
	TOTAL 1ST 50 INSTS.	212,876	15,645	57,380	119,882	19,969	39,571	18,545	21,026

NOTE: Numbers followed by the latter "E" are estimates; those followed by "I" are imputations.

TABLE B-32.
CONTINUED

TOTAL FEDERALLY FINANCED CURRENT R&D EXPENDITURES
IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER
OF AMOUNTS BY INSTITUTION AND SELECTED SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	PHYSICAL SCIENCES					MATHEMATICAL SCIENCES		
	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER	TOTAL	MATH (NON COMPUTER SCIENCE)	COMPUTER SCIENCE
51 U OF CAL SANTA BARBARA	1,534	0	524	619	191	441	153	288
52 U OF CAL SANTA CRUZ	1,529	418	0	0	1,111	100	0	100
53 BROWN UNIVERSITY	1,519	0	535	984	0	1,246	1,006	240
54 UNIV OF RHODE ISLAND	1,517E	34E	266E	234E	983E	400E	220I	180I
55 UNIVERSITY OF DAYTON	1,406	0	397	1,009	0	462	121	341
56 U OF CAL RIVERSIDE	1,385	0	744	641	0	168	168	0
57 UNIVERSITY OF OREGON	1,376	0	709	546	121	153	153	0
58 UNIVERSITY OF WYOMING	1,358	0	105	625	628	0	0	0
59 UNIVERSITY OF VIRGINIA	1,290	98	619	573	0	270	128	142
60 GEORGIA INSTITUTE OF TECH	1,280	0	518	762	0	279	50	229
TOTAL 1ST 60 INSTS.	227,070	16,195	61,797	126,075	23,003	43,090	20,544	22,546
61 RENSSELAER POLY INST	1,276E	0	961E	315E	0	250E	117I	133I
62 WASHINGTON UNIV ST LOUIS	1,240	0	285	955	0	109	109	0
63 BRANDEIS UNIVERSITY	1,221	0	643	578	0	174	174	0
64 YESHIVA UNIVERSITY	1,174	0	391	783	0	392	183I	209I
65 UNIVERSITY OF FLORIDA	1,148	0	539	609	0	30	30	0
66 UNIVERSITY OF DENVER	1,097	1	2	1,094	0	180	106	74
67 VIRGINIA POLYTECHNIC INST	1,067	0	215	105	747	147	147	0
68 LA ST U BATON ROUGE	984	0	410	574	0	111	61I	50I
69 UNIVERSITY OF KANSAS	969	493	453	0	23	329	291	38
70 UNIV OF NC AT CHAPEL HILL	955	0	657	298	0	285	190	95
TOTAL 1ST 70 INSTS.	238,201	16,689	66,353	131,386	23,773	45,097	21,952	23,145
71 WASHINGTON STATE UNIV	860	0	505	354	1	115	49	66
72 U OF CAL DAVIS	846	0	252	594	0	103	3	100
73 SUNY BUFFALO	838	0	582	254	2	785	585	200
74 STEVENS INSTITUTE OF TECH	835	0	312	520	3	0	0	0
75 UNIV OF NEW HAMPSHIRE	781	417	122	242	0	21	21	0
76 UNIV OF STHRN CALIFORNIA	759	0	466	293	0	130	130	0
77 ARIZONA STATE UNIVERSITY	714	0	515	199	0	29	29	0
78 U OF TEX M D ANDERSON HOS	712	0	413	299	0	534	514	20
79 WAYNE STATE UNIVERSITY	691	0	560	131	0	44	26	18
80 UNIVERSITY OF DELAWARE	687	0	439	248	0	25	24	1
TOTAL 1ST 80 INSTS.	245,924	17,106	70,519	134,520	23,779	46,883	23,333	23,550
81 UNIVERSITY OF MIAMI	680	0	245	410	25	25	25	0
82 VANDERBILT UNIVERSITY	676	0	285	391	0	41	38	3
83 U TENNESSEE KNOXVILLE	627	0	206	421	0	41	41	0
84 UNIVERSITY OF HOUSTON	627	0	220	407	0	73	73	0
85 OREGON STATE UNIVERSITY	624	0	522	102	0	97	97	0
86 CATHOLIC UNIV OF AMERICA	623	0	175	448	0	19	5	14
87 GEORGETOWN UNIVERSITY	610	0	426	184	0	29	29	0
88 a/	601	0	221	380	0	166	166	0
89 BOSTON COLLEGE	597E	0	388E	209E	0	90IE	422I	479I
90 UNIVERSITY OF GEORGIA	568	0	442	126	0	58	3	55
TOTAL 1ST 90 INSTS.	252,157	17,106	73,649	137,598	23,804	48,333	24,232	24,101
91 ILLINOIS INST OF TECH	530	0	205	325	0	178	175	3
92 BRIGHAM YOUNG UNIVERSITY	527E	0	352E	175E	0	125E	59I	66I

53	[illegible]	1,519	0	535	984	0	1,246	1,006	240
54	UNIV OF RHODE ISLAND	1,517E	34E	266E	234E	983E	400E	220I	180I
55	UNIVERSITY OF DAYTON	1,406	0	397	1,009	0	462	121	341
56	U OF CAL RIVERSIDE	1,385	0	744	641	0	168	168	0
57	UNIVERSITY OF OREGON	1,376	0	709	546	121	153	153	0
58	UNIVERSITY OF WYOMING	1,358	0	105	625	628	0	0	0
59	UNIVERSITY OF VIRGINIA	1,290	98	619	573	0	270	128	142
60	GEORGIA INSTITUTE OF TECH	1,280	0	518	762	0	279	50	229
	TOTAL 1ST 60 INSTS.	227,070	16,195	61,797	126,075	23,003	43,090	20,544	22,546
61	RENSSELAER POLY INST	1,276E	0	961E	315E	0	250E	117I	133I
62	WASHINGTON UNIV ST LOUIS	1,240	0	285	955	0	109	109	0
63	BRANDEIS UNIVERSITY	1,221	0	643	578	0	174	174	0
64	YESHIVA UNIVERSITY	1,174	0	391	783	0	392	183I	209I
65	UNIVERSITY OF FLORIDA	1,148	0	539	609	0	30	30	0
66	UNIVERSITY OF DENVER	1,097	1	2	1,094	0	180	106	74
67	VIRGINIA POLYTECHNIC INST	1,067	0	215	105	747	147	147	0
68	LA ST U BATON ROUGE	984	0	410	574	0	111	61I	50I
69	UNIVERSITY OF KANSAS	969	493	453	0	23	329	291	38
70	UNIV OF NC AT CHAPEL HILL	955	0	657	298	0	285	190	95
	TOTAL 1ST 70 INSTS.	238,201	16,689	66,353	131,386	23,773	45,097	21,952	23,145
71	WASHINGTON STATE UNIV	860	0	505	354	1	115	49	66
72	U OF CAL DAVIS	846	0	252	594	0	103	3	100
73	SUNY BUFFALO	838	0	582	254	2	785	585	200
74	STEVENS INSTITUTE OF TECH	835	0	312	520	3	0	0	0
75	UNIV OF NEW HAMPSHIRE	781	417	122	242	0	21	21	0
76	UNIV OF STHRN CALIFORNIA	759	0	466	293	0	130	130	0
77	ARIZONA STATE UNIVERSITY	714	0	515	199	0	29	29	0
78	U OF TEX M D ANDERSON HOS	712	0	413	299	0	534	514	20
79	WAYNE STATE UNIVERSITY	691	0	560	131	0	44	26	18
80	UNIVERSITY OF DELAWARE	687	0	439	248	0	25	24	1
	TOTAL 1ST 80 INSTS.	245,924	17,106	70,519	134,520	23,779	46,883	23,333	23,550
81	UNIVERSITY OF MIAMI	680	0	245	410	25	25	25	0
82	VANDERBILT UNIVERSITY	676	0	285	391	0	41	38	3
83	U TENNESSEE KNOXVILLE	627	0	206	421	0	41	41	0
84	UNIVERSITY OF HOUSTON	627	0	220	407	0	73	73	0
85	OREGON STATE UNIVERSITY	624	0	522	102	0	97	97	0
86	CATHOLIC UNIV OF AMERICA	623	0	175	448	0	19	5	14
87	GEORGETOWN UNIVERSITY	610	0	426	184	0	29	29	0
88	a/	601	0	221	380	0	166	166	0
89	BOSTON COLLEGE	597E	0	388E	209E	0	901E	422I	479I
90	UNIVERSITY OF GEORGIA	568	0	442	126	0	58	3	55
	TOTAL 1ST 90 INSTS.	252,157	17,106	73,649	137,598	23,804	48,333	24,232	24,101
91	ILLINOIS INST OF TECH	530	0	205	325	0	178	175	3
92	BRIGHAM YOUNG UNIVERSITY	527E	0	352E	175E	0	125E	59I	66I
93	ROCKEFELLER UNIVERSITY	517	0	218	299	0	0	0	0
94	SUNY ALBANY	502	9	327	166	0	179	178	1
95	UNIV OF MISSOURI ROLLA	495	0	180	315	0	173	16	157
96	UNIV OF NEBRASKA - LNCLN	475	0	260	215	0	94	94	0
97	OLD DOMINION UNIVERSITY	473	0	190	123	160	0	0	0
98	POLYTECHNIC INST OF N Y	432	0	291	141	0	50	23I	27I
99	ANTIOCH COLLEGE	432I	33I	134I	143I	122I	24I	16I	8I
100	COLORADO STATE UNIVERSITY	415	0	313	102	0	204	204	0
	TOTAL 1ST 100 INSTS.	256,955	17,148	76,119	139,602	24,086	49,360	24,997	24,363
	a/ CONFIDENTAL								
	ALL OTHER INSTITUTIONS	23,949	556	11,979	9,680	1,734	6,948	3,789	3,159

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-33. TOTAL SEPARATELY BUDGETED AND FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS BY INSTITUTION AND SOCIAL SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL SOCIAL SCIENCES					FEDERALLY FUNDED SOCIAL SCIENCES				
	TOTAL	ECONOMICS	POLITICAL SCIENCE	SOCIOLOGY	OTHER	TOTAL	ECONOMICS	POLITICAL SCIENCE	SOCIOLOGY	OTHER
UNITED STATES, TOTAL	235,607	46,645	25,768	61,089	102,105	135,781	22,257	10,405	41,497	61,622
1 UNIV OF WISCONSIN-MADISON	13,063	2,062	220	6,327	4,454	8,326	915	47	4,762	2,602
2 UNIVERSITY OF MICHIGAN	12,777	1,192	2,536	7,901	1,148	7,048	714	892	4,854	588
3 HARVARD UNIVERSITY	9,697	4,009	454	548	4,686	4,593	791	6	127	3,669
4 U OF CAL BERKELEY	7,144	687	3,064	244	3,149	4,502	266	1,512	97	2,627
5 UNIVERSITY OF GEORGIA	5,841	1,922	695	1,180	2,044	660	590	0	70	0
6 STANFORD UNIVERSITY	5,775	259	41	88	5,387	5,175	246	40	86	4,803
7 INDIANA UNIV NORTHWEST	5,082	0	0	5,077	5	5,077	0	0	5,077	0
8 MICHIGAN STATE UNIVERSITY	5,057	1,241	135	981	2,700	3,080	958	71	606	1,445
9 UNIVERSITY OF MINNESOTA	5,032	671	648	814	2,899	2,391	342	354	413	1,282
10 MASS INST OF TECHNOLOGY	4,983	1,385	679	577	2,342	2,453	683	353	317	1,100
TOTAL 1ST 10 INSTS.	74,451	13,428	8,472	23,737	28,814	43,305	5,505	3,275	16,409	18,116
11 UNIVERSITY OF CHICAGO	4,876	533	175	1,373	2,795	2,714	265	69	855	1,525
12 PENNSYLVANIA STATE UNIV	4,798	1,058	23	1,614	2,103	1,809	183	0	1,096	530
13 OHIO STATE UNIVERSITY	4,642	668	318	291	3,365	4,064	568	31	203	3,262
14 UNIV OF TEXAS AT AUSTIN	4,288	816	1,115	369	1,988	1,667	395	578	147	547
15 UNIV ILLINOIS URBANA	4,171	1,441	344	294	2,092	1,425	442	65	96	822
16 UNIV OF PENNSYLVANIA	4,063	615	11	425	3,012	2,290	342	10	363	1,575
17 CORNELL UNIVERSITY	4,011	15	4	136	3,856	1,588	14	3	114	1,457
18 RUTGERS THE STATE UNIV	3,931	717	572	1,916	726	1,753	221	105	1,046	381
19 COLUMBIA UNIV MAIN DIV	3,324	13	790	2,246	275	2,481	13	149	2,068	251
20 UNIVERSITY OF HAWAII	3,105	607	17	562	1,919	1,057	245	17	264	531
TOTAL 1ST 20 INSTS.	115,660	19,911	11,841	32,963	50,945	64,153	8,193	4,302	22,661	28,997
21 U OF CAL LOS ANGELES	3,012	37	1,935	131	909	1,312	30	745	90	447
22 FLORIDA STATE UNIVERSITY	2,923	49	33	1,407	1,434	1,719	0	6	784	929
23 UNIVERSITY OF OREGON	2,796	108	25	157	2,506	2,553	75	0	130	2,348
24 NEW YORK UNIVERSITY	2,550	225	347	141	1,837	1,399	221	0	55	1,123
25 UNIVERSITY OF ARIZONA	2,476	1,027	179	410	860	914	376	29	234	275
26 PRINCETON UNIVERSITY	2,234	570	0	60	1,604	917	187	0	12	718
27 UNIVERSITY OF COLORADO	2,075	124	5	933	1,013	1,451	60	0	611	780
28 IOWA ST U OF SCI & TECH	2,060	1,631	0	367	62	1,011	841	0	156	14
29 UNIV OF STHRN CALIFORNIA	2,041	487	586	968	0	1,618	487	403	728	0
30 GEORGE WASHINGTON UNIV	2,037	169	221	865	782	1,730	43	162	775	750
TOTAL 1ST 30 INSTS.	139,864	24,338	15,172	38,402	61,952	78,777	10,513	5,647	26,236	36,381
31 BRANDEIS UNIVERSITY	2,014	64	154	1,796	0	1,684	59	0	1,625	0
32 YALE UNIVERSITY	2,014	996	77	53	888	1,467	664	72	53	678
33 UNIVERSITY OF KANSAS	1,971	93	39	1,432	407	850	53	0	711	86
34 PURDUE UNIV ALL CAMPUSES	1,971	1,369	9	238	355	1,038	539	0	196	303
35 U OF CAL DAVIS	1,858	604	897	5	352	861	289	459	0	113
36 UNIVERSITY OF DENVER	1,834	1,088	130	430	186	1,403	940	81	267	115
37 TEMPLE UNIVERSITY	1,787	0	22	304	1,461	1,341	0	0	87	1,254
38 UNIVERSITY OF ALASKA	1,730	164	92	12	1,462	130	10	0	7	113
39 SUNY ALBANY	1,677	20	740	145	772	1,381	6	563	142	670
40 NC AG & TECH STATE UNIV	1,669	228	0	167	1,274	1,404	207	0	120	1,077
TOTAL 1ST 40 INSTS.	158,389	28,964	17,332	42,984	69,109	90,336	13,280	6,822	29,444	40,790
41 UNIVERSITY OF CONNECTICUT	1,645	333	110	575	627	707	95	63	208	341
42 COLORADO STATE UNIVERSITY	1,588	385	47	291	865	949	285	33	121	510
43 AMERICAN UNIVERSITY THE	1,529	64	54	0	1,411	1,511	64	53	0	1,394
44 NEW MEXICO STATE UNIV	1,502	17	0	128	1,357	1,397	0	0	75	1,322
45 INDIANA UNIV-BLOOMINGTON	1,465	86	192	104	1,083	1,350	79	171	94	1,006
46 SYRACUSE UNIVERSITY	1,429	28	245E	268E	914E	1,230	28	134E	268E	826E
47 BOSTON COLLEGE	1,366E	12E	0	11E	1,343E	395E	0	0	0	395E
48 UNIV OF RHODE ISLAND	1,324E	277E	197E	79E	771E	1,116E	233E	166E	67E	650E
49 NEW MEXICO HIGHLANDS UNIV	1,231	0	0	172	1,059	940	0	0	141	799
50 SUNY BUFFALO	1,225	23	163	845	194	1,120	23	120	795	182
TOTAL 1ST 50 INSTS.	172,693	30,163	18,340	45,457	78,733	101,051	14,061	7,562	31,213	48,215

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

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TABLE B-33, CONTINUED

TOTAL SEPARATELY BUDGETED AND FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITIES AND COLLEGES IN DESCENDING ORDER OF AMOUNTS BY INSTITUTION AND SOCIAL SCIENCES: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL SOCIAL SCIENCES					FEDERALLY FUNDED SOCIAL SCIENCES				
	TOTAL	ECONOMICS	POLITICAL SCIENCE	SOCIOLOGY	OTHER	TOTAL	ECONOMICS	POLITICAL SCIENCE	SOCIOLOGY	OTHER
51 UNIVERSITY OF MIAMI	1,108	308	394	3	403	812	210	270	2	330
52 JOHNS HOPKINS UNIVERSITY	1,074	87	564	323	100	536	46	137	323	30
53 CARNEGIE-MELLON UNIV	1,058	538	520	0	0	702	369	333	0	0
54 UNIV OF MASS AT AMHERST	1,043	327	118	33	565	769	186	53	10	520
55 UNIVERSITY OF ROCHESTER	1,008	267	275	38	428	536	233	162	34	107
56 UNIV OF KENTUCKY ALL CAM	994	476	19	129	370	405	228	19	109	49
57 UNIVERSITY OF WASHINGTON	984	116	447	139	282	363	109	15	84	155
58 WASHINGTON STATE UNIV	975	179	1	422	373	724	91	1	316	316
59 N C STATE UNIV AT RALEIGH	945	3	20	69	853	689	1	0	51	637
60 OREGON STATE UNIVERSITY	888	738	0	95	55	218	112	0	75	31
TOTAL 1ST 60 INSTS.	182,850	33,202	20,698	46,708	82,242	106,805	15,646	8,552	32,217	50,390
61 UNIV OF MD COLLEGE PARK	830	549	100	18	163	384	267	2	13	102
62 UNIVERSITY OF FLORIDA	824	691	21	112	0	282	199	0	83	0
63 UNIV OF MAINE ORONO	817	166	196	228	227	643	90	149	204	200
64 HOWARD UNIVERSITY	810E	365E	0	253E	192E	630	284	0	197	149
65 GEORGIA INSTITUTE OF TECH	808	751	19	19	19	402	374	9	9	10
66 UNIV OF MISSOURI COLUMBIA	771	363	5	60	343	485	182	0	47	256
67 UNIV OF NEBRASKA - LNCLN	766	603	8	90	65	187	137	0	0	50
68 UNIV OKLAHOMA	747	34	465	0	248	346	0	158	0	208
69 TRINITY UNIVERSITY	745	0	5	27	713	518	0	1	11	506
70 UNIVERSITY OF ARKANSAS	734	441	0	6	287	397	340	0	5	52
TOTAL 1ST 70 INSTS.	190,702	37,165	21,517	47,521	84,499	111,099	17,519	8,871	32,786	51,923
71 UNIVERSITY OF IOWA	730	103	200	10	417	489	14	126	7	342
72 MISSISSIPPI STATE UNIV	687	542	0	145	0	364	264	0	100	0
73 NORTHWESTERN UNIVERSITY	681	111	142	38	390	448	107	84	36	221
74 UNIVERSITY OF UTAH	665	0	132	387	146	427	0	0	287	140
75 UNIV OF SOUTH CAROLINA	644	109	252	47	236	77	8	14	47	8
76 CUNY GRADUATE DIVISION	623	0	161	396	66	177	0	78	60	39
77 CASE WESTERN RESERVE UNIV	617	45	0	190	382	389	31	0	173	185
78 UNIV OF TEX AT ARLINGTON	611	34	0	420	157	52	0	0	52	0
79 KANSAS ST UNIVERSITY	610	312	13	27	258	362	155	8	9	190
80 FORDHAM UNIVERSITY	572	3	1	560	8	259	1	1	249	8
TOTAL 1ST 80 INSTS.	197,142	38,424	22,418	49,741	86,559	114,143	18,099	9,182	33,806	53,056
81 UNIVERSITY OF IDAHO	571	404	28	96	45	248	147	2	96	3
82 ADELPHI UNIV	560	0	0	550	10	560	0	0	550	10
83 GALLAUDET COLLEGE	557	0	0	447	110	313	0	0	255	58
84 SOUTHERN METHODIST UNIV	554	113	14	2	425	445	107	13	0	325
85 UNIV OF N C AT GREENSBORO	549	0	1	1	547	361	0	0	0	361
86 UNIVERSITY OF HOUSTON	546	369	150	0	27	227	227	0	0	0
87 TEXAS A & M UNIVERSITY	535	435	0	37	63	273	263	0	10	0
88 UNIV OF SOUTH FLORIDA	533	0	7	0	526	349	0	6	0	343
89 ANTIOCH COLLEGE	528I	14I	20I	124I	370I	473I	9I	16I	102I	346I
90 WAYNE STATE UNIVERSITY	512	31	18	61	402	196	10	0	54	132
TOTAL 1ST 90 INSTS.	202,587	39,790	22,654	51,059	89,084	117,588	18,862	9,219	34,873	54,634
91 UNIV OF MO ST LOUIS	511	92	249	23	147	200	59	2	19	120
92 CALIF ST UNIV FULLERTON	506	0	0	0	506	506	0	0	0	506
93 UNIV OF MASS BOSTON	496I	2I	3I	471I	20I	496I	2I	3I	471I	20I
94 GEORGIA STATE UNIV	485	258	1	155	71	177	98	0	72	7
95 ARIZONA STATE UNIVERSITY	477	51	181	38	207	150	0	52	0	98
96 NEW SCH FOR SOC RESEARCH	472E	0	0	59E	413	0	0	0	0	0
97 TUFTS UNIVERSITY	464	4	262	177	21	332	4	195	131	2
98 BROWN UNIVERSITY	461	139	14	308	0	373	136	0	237	0
99 VANDERBILT UNIVERSITY	458	2	0	173	283	264	2	0	95	167
100 RICE UNIVERSITY	449	3	4	403	39	395	3	4	349	39
TOTAL 1ST 100 INSTS.	207,366	40,341	23,368	52,866	90,791	120,481	19,166	9,475	36,247	55,593
ALL OTHER INSTITUTIONS	28,241	6,304	2,400	8,223	11,314	15,300	3,091	930	5,250	6,029

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-34.

TOTAL AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

FIELD	1964	1966	1968	1970	
TOTAL	529,492	666,997	1,070,727	951,873	1
ENGINEERING	71,699	95,119	126,304	132,623	
PHYSICAL SCIENCES	130,700	182,678	283,811	225,268	
ENVIRONMENTAL SCIENCES	a/	a/	a/	a/	
MATHEMATICAL SCIENCES	22,792	31,856	55,104	38,160	
LIFE SCIENCES	231,993	276,328	452,707	418,472	
PSYCHOLOGY	21,720	19,734	34,425	22,036	
SOCIAL SCIENCES	32,588	44,928	76,217	62,049	
OTHER SCIENCES, NEC	18,000	16,354	42,159	53,265	
FEDERALLY FINANCED					
TOTAL	134,439	212,397	340,447	279,316	
ENGINEERING	10,946	25,049	39,432	38,263	
PHYSICAL SCIENCES	29,701	67,300	95,178	63,107	
ENVIRONMENTAL SCIENCES	a/	a/	a/	a/	
MATHEMATICAL SCIENCES	4,052	11,469	13,676	9,536	
LIFE SCIENCES	81,659	90,173	150,591	142,718	
PSYCHOLOGY	2,121	4,310	10,342	4,848	
SOCIAL SCIENCES	2,020	7,892	17,627	10,303	
OTHER SCIENCES, NEC	3,940	6,204	13,601	10,541	
OTHER SOURCES					
TOTAL	395,053	454,600	730,280	672,557	
ENGINEERING	60,753	70,070	86,872	94,360	
PHYSICAL SCIENCES	100,999	115,378	188,633	162,161	
ENVIRONMENTAL SCIENCES	a/	a/	a/	a/	
MATHEMATICAL SCIENCES	18,740	20,387	41,428	28,624	
LIFE SCIENCES	150,334	186,155	302,116	275,754	
PSYCHOLOGY	19,599	15,424	24,083	17,188	
SOCIAL SCIENCES	30,568	37,036	58,590	51,746	
OTHER SCIENCES, NEC	14,060	10,150	28,558	42,724	

a/ NOT SEPARATELY AVAILABLE

TOTAL AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

	1964	1966	1968	1970	1972	1973
.....	529,492	666,997	1,070,727	951,873	1,028,195	846,285
.....	71,699	95,119	126,304	132,623	102,266	60,108
.....	130,700	182,678	283,811	225,268	190,691	109,760
.....	a/	a/	a/	a/	a/	27,000
.....	22,792	31,856	55,104	38,160	31,512	20,257
.....	231,993	276,328	452,707	418,472	556,039	490,760
.....	21,720	19,734	34,425	22,036	23,600	39,735
.....	32,588	44,928	76,217	62,049	71,256	61,052
.....	18,000	16,354	42,159	53,265	52,831	37,613
.....	134,439	212,397	340,447	279,316	260,337	227,259
.....	10,946	25,049	39,432	38,263	25,624	15,960
.....	29,701	67,300	95,178	63,107	40,902	24,629
.....	a/	a/	a/	a/	a/	5,846
.....	4,052	11,469	13,676	9,536	5,581	3,026
.....	81,659	90,173	150,591	142,718	160,521	162,177
.....	2,121	4,310	10,342	4,848	4,218	5,127
.....	2,020	7,892	17,627	10,303	12,393	5,281
.....	3,940	6,204	13,601	10,541	11,098	5,213
.....	395,053	454,600	730,280	672,557	767,858	619,026
.....	60,753	70,070	86,872	94,360	76,642	44,148
.....	100,999	115,378	188,633	162,161	149,789	85,131
.....	a/	a/	a/	a/	a/	21,154
.....	18,740	20,387	41,428	28,624	25,931	17,231
.....	150,334	186,155	302,116	275,754	395,518	328,583
.....	19,599	15,424	24,083	17,188	19,382	34,608
.....	30,568	37,036	58,590	51,746	58,863	55,771
.....	14,060	10,150	28,558	42,724	41,733	32,400

TABLE B-35. TOTAL AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEER
FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD
SCIENCE, AND TYPE OF INSTITUTION: FY 1973

(DOLLARS IN THOUSANDS)

FIELD	TOTAL	INSTITUTIONS GRANTING DEGREES IN SCIENCE & ENGINEERING		
		DOCTORATE	MASTER'S	BACHELOR'S
TOTAL	846,285	766,692	39,409	35,6
ENGINEERING	60,108	53,562	4,637	4
PHYSICAL SCIENCES	109,760	91,681	12,150	4,7
ENVIRONMENTAL SCIENCES	27,000	23,367	3,277	3
MATHEMATICAL SCIENCES	20,257	18,233	763	9
LIFE SCIENCES	490,760	466,423	13,337	10,1
PSYCHOLOGY	39,735	36,614	1,538	1,4
SOCIAL SCIENCES	61,052	55,694	2,725	2,2
OTHER SCIENCES, NEC	37,613	21,118	982	15,3
FEDERAL GOVERNMENT				
TOTAL	227,259	214,053	3,272	9,4
ENGINEERING	15,960	14,756	873	1
PHYSICAL SCIENCES	24,629	22,078	753	1,6
ENVIRONMENTAL SCIENCES	5,846	5,495	289	
MATHEMATICAL SCIENCES	3,026	2,670	49	2
LIFE SCIENCES	162,177	154,592	854	6,6
PSYCHOLOGY	5,127	4,541	108	4
SOCIAL SCIENCES	5,281	4,959	184	1
OTHER SCIENCES, NEC	5,213	4,962	162	
OTHER SOURCES				
TOTAL	619,026	552,639	36,137	26,2
ENGINEERING	44,148	38,806	3,764	2
PHYSICAL SCIENCES	85,131	69,603	11,397	3,1
ENVIRONMENTAL SCIENCES	21,154	17,872	2,988	2
MATHEMATICAL SCIENCES	17,231	15,563	714	6
LIFE SCIENCES	328,583	311,831	12,483	3,4
PSYCHOLOGY	34,608	32,073	1,430	9
SOCIAL SCIENCES	55,771	50,735	2,541	2,1
OTHER SCIENCES, NEC	32,400	16,156	820	15,2

L AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING
LITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF
SCIENCE, AND TYPE OF INSTITUTION: FY 1973

(DOLLARS IN THOUSANDS)

FIELD	TOTAL	INSTITUTIONS GRANTING DEGREES IN SCIENCE & ENGINEERING			NO SCIENCE DEGREE
		DOCTORATE	MASTER'S	BACHELOR'S	
.....	846,285	766,692	39,409	35,685	4,499
.....	60,108	53,562	4,637	476	1,433
IENCES.....	109,760	91,681	12,150	4,782	1,147
AL SCIENCES.....	27,000	23,367	3,277	356	0
L SCIENCES.....	20,257	18,233	763	903	358
ES.....	490,760	466,423	13,337	10,126	874
.....	39,735	36,614	1,538	1,459	124
NCES.....	61,052	55,694	2,725	2,249	384
CES, NEC.....	37,613	21,118	982	15,334	179
NMENT					
.....	227,259	214,053	3,272	9,426	508
.....	15,960	14,756	873	189	142
IENCES.....	24,629	22,078	753	1,634	164
AL SCIENCES.....	5,846	5,495	289	62	0
L SCIENCES.....	3,026	2,670	49	259	48
ES.....	162,177	154,592	854	6,627	104
.....	5,127	4,541	108	465	13
NCES.....	5,281	4,959	184	115	23
CES, NEC.....	5,213	4,962	162	75	14
.....	619,026	552,639	36,137	26,259	3,991
.....	44,143	38,806	3,764	287	1,291
IENCES.....	85,131	69,603	11,397	3,148	983
AL SCIENCES.....	21,154	17,872	2,988	294	0
L SCIENCES.....	17,231	15,563	714	644	310
ES.....	328,583	311,831	12,483	3,499	770
.....	34,608	32,073	1,430	994	111
NCES.....	55,771	50,735	2,541	2,134	361
CES, NEC.....	32,400	16,156	820	15,259	165

TABLE B-36. TOTAL AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERIN
FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD O
SCIENCE, AND CONTROL: FY 1973

(DOLLARS IN THOUSANDS)

FIELD	TOTAL	TYPE OF CONTROL			
		PRIVATE	PUBLIC		
			TOTAL	FEDERAL	STATE
TOTAL	846,285	229,266	617,019	747	609,49
ENGINEERING	60,108	27,119	32,989	236	31,60
PHYSICAL SCIENCES	109,760	32,918	76,842	52	75,42
ENVIRONMENTAL SCIENCES	27,000	5,893	21,107	18	21,03
MATHEMATICAL SCIENCES	20,257	7,059	13,198	19	12,85
LIFE SCIENCES	490,760	114,936	375,824	145	372,58
PSYCHOLOGY	39,735	19,583	20,152	4	19,95
SOCIAL SCIENCES	61,052	19,754	41,298	33	40,93
OTHER SCIENCES, NEC	37,613	2,004	35,609	240	35,10
FEDERAL GOVERNMENT					
TOTAL	227,259	69,644	157,615	451	155,79
ENGINEERING	15,960	9,413	6,547	233	6,14
PHYSICAL SCIENCES	24,629	11,432	13,197	48	12,86
ENVIRONMENTAL SCIENCES	5,846	2,691	3,155	15	3,13
MATHEMATICAL SCIENCES	3,026	1,547	1,479	18	1,42
LIFE SCIENCES	162,177	39,290	122,887	123	121,95
PSYCHOLOGY	5,127	2,808	2,319	3	2,30
SOCIAL SCIENCES	5,281	1,376	3,905	2	3,88
OTHER SCIENCES, NEC	5,213	1,087	4,126	9	4,09
OTHER SOURCES					
TOTAL	619,026	159,622	459,404	296	453,70
ENGINEERING	44,148	17,706	26,442	3	25,46
PHYSICAL SCIENCES	85,131	21,486	63,645	4	62,55
ENVIRONMENTAL SCIENCES	21,154	3,202	17,952	3	17,90
MATHEMATICAL SCIENCES	17,231	5,512	11,719	1	11,43
LIFE SCIENCES	328,583	75,646	252,937	22	250,63
PSYCHOLOGY	34,608	16,775	17,833	1	17,65
SOCIAL SCIENCES	55,771	18,378	37,393	31	37,05
OTHER SCIENCES, NEC	32,400	917	31,483	231	31,01

AND FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING
TIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF
SCIENCE, AND CONTROL: FY 1973

(DOLLARS IN THOUSANDS)

FIELD	TOTAL	TYPE OF CONTROL			
		PRIVATE	PUBLIC		
			TOTAL	FEDERAL	STATE	LOCAL
.....	846,285	229,266	617,019	747	609,499	6,773
.....	60,108	27,119	32,989	236	31,605	1,148
ENCES.....	109,760	32,918	76,842	52	75,424	1,366
L SCIENCES.....	27,000	5,893	21,107	18	21,034	55
SCIENCES.....	20,257	7,059	13,198	19	12,852	327
S.....	490,760	114,936	375,824	145	372,589	3,090
.....	39,735	19,583	20,152	4	19,953	195
CES.....	61,052	19,754	41,298	33	40,933	332
ES, NEC.....	37,613	2,004	35,609	240	35,109	260
MENT						
.....	227,259	69,644	157,615	451	155,792	1,372
.....	15,960	9,413	6,547	233	6,140	174
ENCES.....	24,629	11,432	13,197	48	12,869	280
L SCIENCES.....	5,846	2,691	3,155	15	3,134	6
SCIENCES.....	3,026	1,547	1,479	18	1,422	39
S.....	162,177	39,290	122,887	123	121,951	813
.....	5,127	2,808	2,319	3	2,300	16
CES.....	5,281	1,376	3,905	2	3,882	21
ES, NEC.....	5,213	1,087	4,126	9	4,094	23
.....	619,026	159,622	459,404	296	453,707	5,401
.....	44,148	17,706	26,442	3	25,465	974
NCES.....	85,131	21,486	63,645	4	62,555	1,086
L SCIENCES.....	21,154	3,202	17,952	3	17,900	49
SCIENCES.....	17,231	5,512	11,719	1	11,430	288
S.....	328,583	75,646	252,937	22	250,638	2,277
.....	34,608	16,775	17,833	1	17,653	179
CES.....	55,771	18,373	37,393	31	37,051	311
ES, NEC.....	32,400	917	31,483	231	31,015	237

TABLE B-37. GEOGRAPHIC DISTRIBUTION OF TOTAL CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION BY FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	846,285	60,108	109,760	27,000	20,257	490,760	39,735	61,052	37,613
NEW ENGLAND	94,238	10,285	11,745	2,428	8,326	52,559	7,981	826	88
CONNECTICUT	26,390	433	1,447	272	2,966	18,709	2,381	173	9
MAINE	568	135	213	37	16	128	4	35	0
MASSACHUSETTS	64,129	9,450	9,408	1,995	5,194	32,053	5,413	581	35
NEW HAMPSHIRE	1,549	83	408	73	58	738	147	26	16
RHODE ISLAND	862	184	139	48	91	335	34	3	28
VERMONT	740	0	130	3	1	596	2	8	0
MIDDLE ATLANTIC	173,794	7,117	22,211	1,798	2,125	101,570	20,876	14,116	3,981
NEW JERSEY	12,498	1,604	4,314	252	528	3,428	1,622	276	474
NEW YORK	97,487	2,560	15,443	1,483	1,003	63,821	8,184	2,562	2,431
PENNSYLVANIA	63,809	2,953	2,454	63	594	34,321	11,070	11,278	1,076
EAST NORTH CENTRAL	150,201	11,420	22,043	5,113	2,279	70,211	3,205	11,041	24,889
ILLINOIS	36,902	2,584	3,645	524	818	19,545	853	6,570	2,363
INDIANA	13,990	1,110	7,311	271	502	3,418	682	249	447
MICHIGAN	16,730	5,699	1,677	286	360	7,722	339	613	34
OHIO	35,815	803	2,712	583	105	30,439	728	407	38
WISCONSIN	46,764	1,224	6,698	3,449	494	9,087	603	3,202	22,007
WEST NORTH CENTRAL	82,958	2,585	6,411	800	1,351	63,155	1,319	5,486	1,851
IOWA	12,257	252	125	2	1,128	9,702	61	954	33
KANSAS	7,679	514	487	347	23	5,256	45	798	209
MINNESOTA	41,175	389	2,397	243	128	32,139	1,151	3,419	1,309
MISSOURI	15,355	269	2,756	108	68	11,907	50	148	49
NEBRASKA	3,832	58	209	0	0	3,562	2	1	0
NORTH DAKOTA	756	50	10	9	1	369	1	115	201
SOUTH DAKOTA	1,904	1,053	427	91	3	220	9	51	50
SOUTH ATLANTIC	100,796	6,647	12,780	4,630	3,282	64,892	2,334	4,800	1,431
DELAWARE	3,300	114	2,728	359	0	94	0	5	0
DISTRICT OF COLUMBIA	9,063	415	287	60	606	6,988	172	482	53
FLORIDA	26,294	1,029	982	1,847	1,442	19,980	207	531	276
GEORGIA	12,707	521	3,436	444	165	7,502	55	568	16
MARYLAND	7,169	715	1,403	944	147	3,495	52	152	261
NORTH CAROLINA	28,724	2,766	3,040	572	628	17,224	1,627	2,337	530
SOUTH CAROLINA	1,979	181	214	129	24	1,168	57	99	107
VIRGINIA	10,271	478	604	229	260	7,774	132	613	181
WEST VIRGINIA	1,289	428	86	46	10	667	32	13	7
EAST SOUTH CENTRAL	25,882	1,749	1,583	1,035	337	17,914	438	2,590	236
ALABAMA	10,681	117	114	12	58	9,607	71	540	162
KENTUCKY	5,202	597	443	944	21	1,202	39	1,914	42
MISSISSIPPI	2,364	373	312	17	49	1,366	141	84	22
TENNESSEE	7,635	662	714	62	209	5,739	187	52	10
WEST SOUTH CENTRAL	47,039	4,989	3,047	444	328	33,983	426	2,314	1,508
ARKANSAS	706	85	106	1	6	485	5	18	0
LOUISIANA	4,954	894	141	75	68	2,639	42	142	953
OKLAHOMA	904	183	128	44	9	442	5	53	40
TEXAS	40,475	3,827	2,672	324	245	30,417	374	2,101	515
MOUNTAIN	58,962	6,853	9,516	1,467	971	31,034	1,578	4,270	3,273

MASSACHUSETTS	64,129	9,850	19,408	1,995	5,194	32,053	5,413	581	35
NEW HAMPSHIRE	1,549	83	408	73	58	738	147	26	16
RHODE ISLAND	862	184	139	48	91	335	34	3	28
VERMONT	740	0	130	3	1	596	2	8	0
MIDDLE ATLANTIC	173,794	7,117	22,211	1,798	2,125	101,570	20,876	14,116	3,981
NEW JERSEY	12,498	1,604	4,314	252	528	3,428	1,622	276	474
NEW YORK	97,487	2,560	15,443	1,483	1,003	63,821	8,184	2,562	2,431
PENNSYLVANIA	63,809	2,953	2,454	63	594	34,321	11,070	11,278	1,076
EAST NORTH CENTRAL	150,201	11,420	22,043	5,113	2,279	70,211	3,205	11,041	24,889
ILLINOIS	36,902	2,584	3,645	524	818	19,545	853	6,570	2,363
INDIANA	13,990	1,110	7,311	271	502	3,418	682	249	447
MICHIGAN	16,730	5,699	1,677	286	360	7,722	339	613	34
OHIO	35,815	803	2,712	583	105	30,439	728	407	38
WISCONSIN	46,764	1,224	6,698	3,449	494	9,087	603	3,202	22,007
WEST NORTH CENTRAL	82,958	2,585	6,411	800	1,351	63,155	1,319	5,486	1,851
IOWA	12,257	252	125	2	1,128	9,702	61	954	33
KANSAS	7,679	514	487	347	23	5,256	45	798	209
MINNESOTA	41,175	389	2,397	243	128	32,139	1,151	3,419	1,309
MISSOURI	15,355	269	2,756	108	68	11,907	50	148	49
NEBRASKA	3,832	58	209	0	0	3,562	2	1	0
NORTH DAKOTA	756	50	10	9	1	369	1	115	201
SOUTH DAKOTA	1,904	1,053	427	91	3	220	9	51	50
SOUTH ATLANTIC	100,796	6,647	12,780	4,630	3,282	64,892	2,334	4,800	1,431
DELAWARE	3,300	114	2,728	359	0	94	0	5	0
DISTRICT OF COLUMBIA	9,063	415	287	60	606	6,988	172	482	53
FLORIDA	26,294	1,029	982	1,847	1,442	19,980	207	531	276
GEORGIA	12,707	521	3,436	444	165	7,502	55	568	16
MARYLAND	7,169	715	1,403	944	147	3,495	52	152	261
NORTH CAROLINA	28,724	2,766	3,040	572	628	17,224	1,627	2,337	530
SOUTH CAROLINA	1,979	181	214	129	24	1,168	57	99	107
VIRGINIA	10,271	478	604	229	260	7,774	132	613	181
WEST VIRGINIA	1,289	428	86	46	10	667	32	13	7
EAST SOUTH CENTRAL	25,882	1,749	1,583	1,035	337	17,914	438	2,590	236
ALABAMA	10,681	117	114	12	58	9,607	71	540	162
KENTUCKY	5,202	597	443	944	21	1,202	39	1,914	42
MISSISSIPPI	2,364	373	312	17	49	1,366	141	84	22
TENNESSEE	7,635	662	714	62	209	5,739	187	52	10
WEST SOUTH CENTRAL	47,039	4,989	3,047	444	328	33,983	426	2,314	1,508
ARKANSAS	706	85	106	1	6	485	5	18	0
LOUISIANA	4,954	894	141	75	68	2,639	42	142	953
OKLAHOMA	904	183	128	44	9	442	5	53	40
TEXAS	40,475	3,827	2,672	324	245	30,417	374	2,101	515
MOUNTAIN	58,962	6,853	9,516	1,467	971	31,034	1,578	4,270	3,273
ARIZONA	9,536	410	2,748	279	230	3,198	276	2,373	22
COLORADO	31,570	1,076	4,371	271	272	21,323	732	1,289	2,236
IDAHO	682	89	92	15	2	377	2	16	89
MONTANA	1,406	300	203	249	14	552	15	23	50
NEVADA	607	29	229	150	36	94	10	59	0
NEW MEXICO	3,982	492	151	82	53	2,243	451	144	366
UTAH	10,983	4,300	1,709	406	364	3,236	92	366	510
WYOMING	196	157	13	15	0	11	0	0	0
PACIFIC	108,223	7,473	20,102	8,803	1,242	53,185	1,553	15,557	308
ALASKA	620	0	293	258	0	45	0	24	0
CALIFORNIA	71,975	5,529	14,507	6,442	905	31,161	334	13,010	87
HAWAII	12,395	941	4,349	13	1	5,845	14	1,232	0
OREGON	10,524	455	519	1,800	262	7,183	115	45	145
WASHINGTON	12,709	548	434	290	74	8,951	1,090	1,246	76
OUTLYING AREAS	4,192	990	322	482	16	2,257	25	52	48

TABLE B-38. GEOGRAPHIC DISTRIBUTION OF FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	227,259	15,960	24,629	5,846	3,026	162,177	5,127	5,281	5,213
NEW ENGLAND	25,154	4,154	2,093	1,322	614	16,116	708	108	39
CONNECTICUT	11,525	229	925	92	470	9,275	506	26	2
MAINE	307	55	157	24	0	71	0	0	0
MASSACHUSETTS	11,446	3,660	640	1,140	43	5,762	104	78	17
NEW HAMPSHIRE	454	43	179	19	16	125	70	2	0
RHODE ISLAND	716	167	71	47	85	296	28	2	20
VERMONT	708	0	121	0	0	587	0	0	0
MIDDLE ATLANTIC	34,270	2,606	4,053	274	840	23,101	1,861	982	553
NEW JERSEY	2,362	217	585	37	296	1,023	100	33	71
NEW YORK	15,755	1,401	2,032	210	15	11,305	688	40	64
PENNSYLVANIA	16,153	988	1,436	27	529	10,773	1,073	909	418
EAST NORTH CENTRAL	34,883	2,869	6,188	809	345	19,117	1,043	1,713	2,799
ILLINOIS	8,949	1,177	1,513	186	82	3,719	207	109	1,956
INDIANA	5,279	440	2,516	118	213	1,579	248	58	107
MICHIGAN	4,340	605	702	109	36	2,649	78	149	12
OHIO	4,720	308	425	34	4	3,787	152	5	5
WISCONSIN	11,595	339	1,032	362	10	7,383	358	1,392	719
WEST NORTH CENTRAL	25,692	863	1,058	104	34	22,328	143	847	315
IOWA	2,554	85	47	0	0	2,178	1	243	0
KANSAS	2,868	195	244	30	12	2,108	18	186	75
MINNESOTA	12,117	233	239	33	17	11,012	84	300	199
MISSOURI	6,203	246	474	10	5	5,303	37	95	33
NEBRASKA	1,546	58	47	0	0	1,441	0	0	0
NORTH DAKOTA	275	21	7	8	0	230	0	4	5
SOUTH DAKOTA	129	25	0	23	0	56	3	19	3
SOUTH ATLANTIC	43,397	2,087	2,993	1,415	943	34,496	506	402	555
DELAWARE	95	0	33	0	0	58	0	4	0
DISTRICT OF COLUMBIA	6,188	151	158	29	445	5,212	63	109	21
FLORIDA	16,757	328	551	577	293	14,790	66	61	91
GEORGIA	2,229	114	246	40	46	1,685	32	66	0
MARYLAND	3,212	121	792	465	10	1,759	37	9	19
NORTH CAROLINA	9,677	912	942	238	138	6,679	271	150	347
SOUTH CAROLINA	472	29	61	11	9	354	1	0	7
VIRGINIA	4,150	94	204	55	2	3,696	26	3	70
WEST VIRGINIA	617	338	6	0	0	263	10	0	0
EAST SOUTH CENTRAL	10,410	227	280	12	33	9,179	218	455	6
ALABAMA	7,164	32	18	1	0	6,730	3	379	1
KENTUCKY	641	29	20	0	2	516	14	60	0
MISSISSIPPI	753	60	111	5	6	453	107	10	1
TENNESSEE	1,852	106	131	6	25	1,480	94	6	4
WEST SOUTH CENTRAL	14,479	715	741	115	38	12,344	66	77	383
ARKANSAS	279	39	51	0	3	174	1	11	0
LOUISIANA	1,590	86	65	31	12	1,332	30	8	26
OKLAHOMA	305	50	35	16	3	197	1	1	2
TEXAS	12,305	540	590	68	20	10,641	34	57	355
MOUNTAIN	11,465	710	1,875	492	106	6,997	291	532	462
ARIZONA	2,058	62	601	79	64	810	147	295	0
COLORADO	5,840	359	812	98	29	3,896	111	127	408
IDAHO	154	9	13	12	0	91	1	2	26

VERMONT	708	0	121	0	0	587	0	0	0
MIDDLE ATLANTIC	34,270	2,606	4,053	274	840	23,101	1,861	982	553
NEW JERSEY	2,362	217	585	37	296	1,023	100	33	71
NEW YORK	15,755	1,401	2,032	210	15	11,305	688	40	64
PENNSYLVANIA	16,153	988	1,436	27	529	10,773	1,073	909	418
EAST NORTH CENTRAL	34,883	2,869	6,188	809	345	19,117	1,043	1,713	2,799
ILLINOIS	8,949	1,177	1,513	186	82	3,719	207	109	1,956
INDIANA	5,279	440	2,516	118	213	1,579	248	58	107
MICHIGAN	4,340	605	702	109	36	2,649	78	149	12
OHIO	4,720	308	425	34	4	3,787	152	5	5
WISCONSIN	11,595	339	1,032	362	10	7,383	358	1,392	719
WEST NORTH CENTRAL	25,692	863	1,058	104	34	22,328	143	847	315
IOWA	2,554	85	47	0	0	2,178	1	243	0
KANSAS	2,868	195	244	30	12	2,108	18	186	75
MINNESOTA	12,117	233	239	33	17	11,012	84	300	199
MISSOURI	6,203	246	474	10	5	5,303	37	95	33
NEBRASKA	1,546	58	47	0	0	1,441	0	0	0
NORTH DAKOTA	275	21	7	8	0	230	0	4	5
SOUTH DAKOTA	129	25	0	23	0	56	3	19	3
SOUTH ATLANTIC	43,397	2,087	2,993	1,415	943	34,496	506	402	555
DELAWARE	95	0	33	0	0	58	0	4	0
DISTRICT OF COLUMBIA	6,188	151	158	29	445	5,212	63	109	21
FLORIDA	16,757	328	551	577	293	14,790	66	61	91
GEORGIA	2,229	114	246	40	46	1,685	32	66	0
MARYLAND	3,212	121	792	465	10	1,759	37	9	19
NORTH CAROLINA	9,677	912	942	238	138	6,679	271	150	347
SOUTH CAROLINA	472	29	61	11	9	354	1	0	7
VIRGINIA	4,150	94	204	55	2	3,696	26	3	70
WEST VIRGINIA	617	338	6	0	0	263	10	0	0
EAST SOUTH CENTRAL	10,410	227	280	12	33	9,179	218	455	6
ALABAMA	7,164	32	18	1	0	6,730	3	379	1
KENTUCKY	641	29	20	0	2	516	14	60	0
MISSISSIPPI	753	60	111	5	6	453	107	10	1
TENNESSEE	1,852	106	131	6	25	1,480	94	6	4
WEST SOUTH CENTRAL	14,479	715	741	115	38	12,344	66	77	383
ARKANSAS	279	39	51	0	3	174	1	11	0
LOUISIANA	1,590	86	65	31	12	1,332	30	8	26
OKLAHOMA	305	50	35	16	3	197	1	1	2
TEXAS	12,305	540	590	68	20	10,641	34	57	355
MOUNTAIN	11,465	710	1,875	492	106	6,997	291	532	462
ARIZONA	2,058	62	601	79	64	810	147	295	0
COLORADO	5,840	359	812	98	29	3,896	111	127	408
IDAHO	154	9	13	12	0	91	1	2	26
MONTANA	569	115	159	124	0	169	0	1	1
NEVADA	186	3	2	125	0	21	4	31	0
NEW MEXICO	1,261	50	32	26	1	1,097	4	51	0
UTAH	1,397	112	256	28	12	913	24	25	27
WYOMING	0	0	0	0	0	0	0	0	0
PACIFIC	26,497	1,550	5,323	1,281	71	17,728	288	160	96
ALASKA	579	0	293	249	0	15	0	22	0
CALIFORNIA	11,270	1,394	3,393	467	64	5,576	232	125	19
HAWAII	4,580	0	1,221	0	0	3,359	0	0	0
OREGON	7,260	44	351	429	3	6,307	52	8	66
WASHINGTON	2,808	112	65	136	4	2,471	4	5	11
OTHER	1,012	179	25	22	2	771	3	5	5

TABLE B-39. CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	846,285	60,108	109,760	27,000	20,257	490,760	39,735	61,052	37,613
1 SUNY STONY BROOK	42,064	224	9,665	357	0	31,742	0	76	0
2 UNIVERSITY OF MINNESOTA	40,856	388	2,306	217	68	32,060	1,120	3,401	1,296
3 TEMPLE UNIVERSITY	28,992	47	101	0	0	10,331	7,599	10,914	0
4 UNIVERSITY OF COLORADO	27,760	457	4,000	200	106	19,522	685	890	1,900
5 PENNSYLVANIA STATE UNIV	23,113	470	462	0	8	18,769	3,169	84	151
6 UNIVERSITY OF CONNECTICUT	20,915	205	141	160	2,261	15,763	2,320	65	0
7 UNIVERSITY OF FLORIDA	18,487	638	302	220	1,057	15,916	37	317	0
8 UNIV OF WISCONSIN-MADISON	18,053	685	2,706	1,691	451	6,495	497	1,487	4,041
9 DUKE UNIVERSITY	18,022	2,136I	2,272I	486I	519I	9,267I	1,507I	1,675I	160I
10 UNIV OF MASS AT AMHERST	17,964	127	5,208	532	3,548	3,475	4,989	85	0
TOTAL 1ST 10 INSTS.	256,226	5,377	27,163	3,863	8,018	163,340	21,923	18,994	7,548
11 MED COLL OHIO AT TOLEDO	14,196	0	0	0	0	14,196	0	0	0
12 OHIO STATE UNIVERSITY	13,730	85	0	0	1	13,539	0	91	14
13 UNIV OF MASS MED SCHOOL	13,556	0	0	0	0	13,556	0	0	0
14 UNIVERSITY OF HAWAII	12,395	941	4,349	13	1	5,845	14	1,232	0
15 U OF CAL SAN DIEGO	12,298	0	226	5,022	0	1,671	0	5,379	0
16 U TEX HLTH SCI CTR DALLAS	12,108	0	0	0	0	12,108	0	0	0
17 U OF CAL LOS ANGELES	11,975	0	0	5	0	11,970	0	0	0
18 U OF WIS MILWAUKEE	11,454	164	1,680	1,633	5	1,727	36	81	6,128
19 HARVARD UNIVERSITY	11,354	1,324	1,563	116	1,324	7,027	0	0	0
20 UNIVERSITY OF ROCHESTER	9,961	599	1,334	0	24	2,452	5,393	133	28
TOTAL 1ST 20 INSTS.	379,253	8,490	36,313	10,652	9,373	247,431	27,366	25,910	13,718
21 UNIVERSITY OF MICHIGAN	9,367	4,536	641	209	134	3,173	222	482	0
22 SOUTHERN ILLINOIS UNIV	9,294	11	33	0	0	3,030	1	6,219	0
23 UNIV OF TEXAS AT AUSTIN	9,275	3,099	1,720	60	63	2,197	35	1,704	397
24 NEW YORK UNIVERSITY	8,735	0	1,105	0	749	4,316	1,592	973	0
25 UNIV ILLINOIS URBANA	8,664	2,020	1,129	267	109	3,348	205	83	1,503
26 UNIV OF NC AT CHAPEL HILL	8,215	171	310	51	22	6,828	77	498	258
27 SAN FRANCISCO ST UNIV	8,159	0	6,591	0	0	1,568	0	0	0
28 UNIV OF STHRN CALIFORNIA	7,813	1,950	92	227	1	1,995	104	3,444	0
29 UNIVERSITY OF WASHINGTON	7,635	119	173	216	34	5,997	1,063	33	0
30 CALIFORNIA INST OF TECH	7,557	883	4,562	284	53	1,740	0	17	18
TOTAL 1ST 30 INSTS.	463,967	21,279	52,639	11,966	10,538	281,623	30,665	39,363	15,894
31 GEORGE WASHINGTON UNIV	7,441	277	23	35	236	6,496	43	285	46
32 MASS INST OF TECHNOLOGY	7,297	6,447	107	0	0	743	0	0	0
33 U OF WIS PARKSIDE	7,251	49	4	2	0	16	0	206	6,974
34 UNIVERSITY OF IOWA	6,973	0	0	0	1,087	5,886	0	0	0
35 CORNELL UNIVERSITY	6,898	813	935	15	0	5,055	53	22	5
36 RUTGERS THE STATE UNIV	6,488	280	2,780	132	336	1,089	1,439	50	382
37 U OF WIS GREEN BAY	6,223	0	0	33	1	5	0	1,368	4,815
38 VIRGINIA COMMONWLTH UNIV	6,211	0	0	0	0	6,086	0	125	0
39 U OF CAL SAN FRANCISCO	6,100	0	0	0	0	6,100	0	0	0
40 U OF MO K C	5,914	0	103	0	0	5,748	0	63	0
TOTAL 1ST 40 INSTS.	530,763	29,145	56,591	12,183	12,198	318,848	32,200	41,482	28,116
41 UNIVERSITY OF UTAH	5,850	577	1,218	358	286	2,577	61	302	471
42 UNIVERSITY OF CHICAGO	5,746	0	15	0	0	5,711	0	20	0
43 UNIVERSITY OF ARIZONA	5,586	125	2,154	212	197	2,840	13	45	0
44 U TEX HLTH SCI CR SAN ANT	5,306	0	0	0	0	5,306	0	0	0
[illegible]	[illegible]	0	0	0	0	5,105	48	0	0

			224	9,885	357	0	31,742	0	76	0
2	UNIVERSITY OF MINNESOTA	40,856	388	2,306	217	68	32,060	1,120	3,401	1,296
3	TEMPLE UNIVERSITY	28,992	47	101	0	0	10,331	7,599	10,914	0
4	UNIVERSITY OF COLORADO	27,760	457	4,000	200	106	19,522	685	890	1,900
5	PENNSYLVANIA STATE UNIV	23,113	470	462	0	8	18,769	3,169	84	151
6	UNIVERSITY OF CONNECTICUT	20,915	205	141	160	2,261	15,763	2,320	65	0
7	UNIVERSITY OF FLORIDA	18,487	638	302	220	1,057	15,916	37	317	0
8	UNIV OF WISCONSIN-MADISON	18,053	685	2,706	1,691	451	6,495	497	1,487	4,041
9	DUKE UNIVERSITY	18,022	2,136I	2,272I	486I	519I	9,267I	1,507I	1,675I	160I
10	UNIV OF MASS AT AMHERST	17,964	127	5,208	532	3,548	3,475	4,989	85	0
	TOTAL 1ST 10 INSTS.	256,226	5,377	27,163	3,863	8,018	163,340	21,923	18,994	7,548
11	MED COLL OHIO AT TOLEDO	14,196	0	0	0	0	14,196	0	0	0
12	OHIO STATE UNIVERSITY	13,730	85	0	0	1	13,539	0	91	14
13	UNIV OF MASS MED SCHOOL	13,556	0	0	0	0	13,556	0	0	0
14	UNIVERSITY OF HAWAII	12,395	941	4,349	13	1	5,845	14	1,232	0
15	U OF CAL SAN DIEGO	12,298	0	226	5,022	0	1,671	0	5,379	0
16	U TEX HLTH SCI CTR DALLAS	12,108	0	0	0	0	12,108	0	0	0
17	U OF CAL LOS ANGELES	11,975	0	0	5	0	11,970	0	0	0
18	U OF WIS MILWAUKEE	11,454	164	1,680	1,633	5	1,727	36	81	6,128
19	HARVARD UNIVERSITY	11,354	1,324	1,563	116	1,324	7,027	0	0	0
20	UNIVERSITY OF ROCHESTER	9,961	599	1,332	0	24	2,452	5,393	133	28
	TOTAL 1ST 20 INSTS.	379,253	8,490	36,313	10,652	9,373	247,431	27,366	25,910	13,718
21	UNIVERSITY OF MICHIGAN	9,367	4,536	611	209	134	3,173	222	482	0
22	SOUTHERN ILLINOIS UNIV	9,294	11	33	0	0	3,030	1	6,219	0
23	UNIV OF TEXAS AT AUSTIN	9,275	3,099	1,720	60	63	2,197	35	1,704	397
24	NEW YORK UNIVERSITY	8,735	0	1,105	0	749	4,316	1,592	973	0
25	UNIV ILLINOIS URBANA	8,664	2,020	1,129	267	109	3,348	205	83	1,503
26	UNIV OF NC AT CHAPEL HILL	8,215	171	310	51	22	6,828	77	498	258
27	SAN FRANCISCO ST UNIV	8,159	0	6,591	0	0	1,568	0	0	0
28	UNIV OF STHRN CALIFORNIA	7,813	1,950	92	227	1	1,995	104	3,444	0
29	UNIVERSITY OF WASHINGTON	7,635	119	173	216	34	5,997	1,063	33	0
30	CALIFORNIA INST OF TECH	7,557	883	4,562	284	53	1,740	0	17	18
	TOTAL 1ST 30 INSTS.	463,967	21,279	52,639	11,966	10,538	281,623	30,665	39,363	15,894
31	GEORGE WASHINGTON UNIV	7,441	277	23	35	236	6,496	83	285	86
32	MASS INST OF TECHNOLOGY	7,297	6,447	107	0	0	743	0	0	0
33	U OF WIS PARKSIDE	7,251	49	4	2	0	16	0	206	6,974
34	UNIVERSITY OF IOWA	6,973	0	0	0	1,087	5,886	0	0	0
35	CORNELL UNIVERSITY	6,898	813	935	15	0	5,055	53	22	5
36	RUTGERS THE STATE UNIV	6,488	280	2,780	132	336	1,089	1,439	50	382
37	U OF WIS GREEN BAY	6,223	0	0	33	1	6	0	1,368	4,815
38	VIRGINIA COMMONWLTH UNIV	6,211	0	0	0	0	6,086	0	125	0
39	U OF CAL SAN FRANCISCO	6,100	0	0	0	0	6,100	0	0	0
40	U OF MO K C	5,914	0	103	0	0	5,748	0	63	0
	TOTAL 1ST 40 INSTS.	530,763	29,145	56,591	12,183	12,198	318,848	32,200	41,482	28,116
41	UNIVERSITY OF UTAH	5,850	577	1,218	358	286	2,577	61	302	471
42	UNIVERSITY OF CHICAGO	5,746	0	15	0	0	5,711	0	20	0
43	UNIVERSITY OF ARIZONA	5,586	125	2,154	212	197	2,840	13	45	0
44	U TEX HLTH SCI CR SAN ANT	5,306	0	0	0	0	5,306	0	0	0
45	UNIV OF SOUTH ALABAMA	5,149	0	0	0	0	5,105	44	0	0
46	UNIVERSITY OF GEORGIA	5,110	0	111	395	96	3,990	42	476	0
47	BRANDEIS UNIVERSITY	4,955	0	26	0	0	4,927	2	0	0
48	UNIV ALABAMA BIRMINGHAM	4,934	0	1	0	52	4,242	0	524	115
49	WASHINGTON UNIV ST LOUIS	4,929	234	97	1	0	4,509	40	48	0
50	U OF OREGON MED SCHOOL	4,887E	0	0	0	0	4,887E	0	0	0
	TOTAL 1ST 50 INSTS.	583,215	30,081	60,213	13,149	12,829	362,942	32,402	42,897	28,702

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-39. CONTINUED

CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 IOWA ST U OF SCI & TECH	4,725	249	89	1	40	3,311	51	951	33
52 STANFORD UNIVERSITY	4,716	1,115	1,498	207	23	1,773	35	63	2
53 BRIGHAM YOUNG UNIVERSITY	4,656E	3,617E	482E	17E	59E	419E	21E	41E	0
54 VANDERBILT UNIVERSITY	4,519	90	0	0	138	4,291	0	0	0
55 PURDUE UNIV ALL CAMPUSES	4,506	714	2,035	103	121	1,202	46	71	214
56 KANSAS ST UNIVERSITY	4,475	166	112	101	4	3,928	14	56	94
57 YALE UNIVERSITY	4,395	191	974	94	265	2,730	47	94	0
58 U TEX HLTH SCI CR HOUSTON	4,095	0	0	0	0	4,095	0	0	0
59 NEW YORK MEDICAL COLLEGE	3,949	0	0	0	0	3,949	0	0	0
60 WAYNE STATE UNIVERSITY	3,934	292	314	32	11	3,224	45	16	0
TOTAL 1ST 60 INSTS.	627,185	36,515	65,717	13,704	13,490	391,864	32,661	44,189	29,045
61 EMORY UNIVERSITY	3,797	0	2,951	0	0	846	0	0	0
62 UNIV OF PENNSYLVANIA	3,752	230	542	2	3	2,395	12	149	419
63 UNIVERSITY OF MIAMI	3,734	37	51	407	1	3,223	13	2	0
64 JOHNS HOPKINS UNIVERSITY	3,663	106	557	769	0	2,156	30	45	0
65 ARIZONA STATE UNIVERSITY	3,615	181	540	30	13	297	253	2,301	0
66 BOSTON UNIVERSITY	3,500E	415I	441I	94I	101I	1,801I	292I	326I	30I
67 SUNY MARITIME COLLEGE	3,491E	53I	63I	24I	8I	975I	11I	294I	2,063I
68 WESTERN WASHINGTON ST COL	3,455	0	6	4	1	2,278	1	1,165	0
69 EARLHAM COLLEGE	3,448	0	1,622	0	304	1,014	508	0	0
70 VASSAR COLLEGE	3,382	0	9	5	0	3,357	8	3	0
TOTAL 1ST 70 INSTS.	663,022	37,537	72,499	15,039	13,921	410,206	33,789	48,474	31,557
71 UNIVERSITY OF DELAWARE	3,300	114	2,728	359	0	94	0	5	0
72 UNIV OF KENTUCKY ALL CAM	3,296	524	327	0	0	545	0	1,896	4
73 YESHIVA UNIVERSITY	3,234	0	286	0	0	2,944	4	0	0
74 UNIVERSITY OF NEW MEXICO	3,225	75	95	18	0	2,138	443	90	366
75 U OF CAL SANTA BARBARA	3,154	0	102	60	0	0	0	2,992	0
76 KNOX COLLEGE	3,142E	25I	1,385I	57I	269I	932I	442I	20I	12I
77 COLORADO STATE UNIVERSITY	3,043	414	194	67	10	1,662	9	381	306
78 U OF ILL MEDICAL CENTER	3,030	0	8	0	0	3,022	0	0	0
79 OREGON STATE UNIVERSITY	3,027	317	237	1,749	13	597	2	23	89
80 INDIANA UNIV-BLOOMINGTON	3,014	0	2,504	53	8	185	67	56	141
TOTAL 1ST 80 INSTS.	694,487	39,006	80,365	17,402	14,221	422,325	34,756	53,937	32,475
81 MARQUETTE UNIVERSITY	2,912	98	2,071	0	0	732	9	2	0
82 U OF CAL IRVINE	2,703	405	0	0	453	1,508	0	337	0
83 U OF NEB MED C AT OMAHA	2,693E	0	0	0	0	2,693E	0	0	0
84 UNIVERSITY OF KANSAS	2,620	290	295	237	17	942	25	699	115
85 UNIVERSITY OF VIRGINIA	2,586	416	253	205	9	1,482	24	87	110
86 ALBANY MED COL OF UNION U	2,519	0	0	0	0	2,519	0	0	0
87 MEDICAL COLL OF GEORGIA	2,518	0	0	0	0	2,518	0	0	0
88 BAYLOR COLLEGE OF MED	2,370	0	0	0	0	2,370	0	0	0
89 UNIV OF MD COLLEGE PARK	2,279	584	698	150	104	684	14	23	22
90 U TEX GALVESTON MED BRAN	2,141	0	0	0	0	2,141	0	0	0
TOTAL 1ST 90 INSTS.	719,828	40,799	83,682	17,994	14,804	439,914	34,828	55,085	32,722
91 UNIV OF MISSOURI ROLLA	2,107	0	2,059	0	48	0	0	0	0
92 UNIVERSITY OF PITTSBURGH	2,066	89	514	14	10	1,289	41	54	55
93 U OF CAL BERKELEY	2,026	0	0	162	274	1,500	0	90	0
94 UNIVERSITY OF OREGON	2,006	0	232	22	0	1,626	94	7	25
95 CAMDEN COUNTY COLLEGE	2,000E	548I	517I	0I	173I	424I	60I	189I	89I
96 COLUMBIA UNIV MAIN DIV	1,955	34	242	262	0	859	0	430	128

52 STANFORD UNIVERSITY	4,716	1,115	1,498	207	23	1,773	35	63	2
53 BRIGHAM YOUNG UNIVERSITY	4,656E	3,617E	482E	17E	59E	419E	21E	41E	0
54 VANDERBILT UNIVERSITY	4,519	90	0	0	138	4,291	0	0	0
55 PURDUE UNIV ALL CAMPUSES	4,506	714	2,035	103	121	1,202	46	71	214
56 KANSAS ST UNIVERSITY	4,475	166	112	101	4	3,928	14	56	94
57 YALE UNIVERSITY	4,395	191	974	94	265	2,730	87	94	0
58 U TEX HLTH SCI CR HOUSTON	4,095	0	0	0	0	4,095	0	0	0
59 NEW YORK MEDICAL COLLEGE	3,949	0	0	0	0	3,949	0	0	0
60 WAYNE STATE UNIVERSITY	3,934	292	314	32	11	3,224	45	16	0
TOTAL 1ST 60 INSTS.	627,183	36,515	65,717	13,704	13,490	391,864	32,661	44,189	29,045
61 EMORY UNIVERSITY	3,797	0	2,951	0	0	846	0	0	0
62 UNIV OF PENNSYLVANIA	3,752	230	542	2	3	2,395	12	149	419
63 UNIVERSITY OF MIAMI	3,734	37	51	407	1	3,223	13	2	0
64 JOHNS HOPKINS UNIVERSITY	3,663	106	557	769	0	2,156	30	45	0
65 ARIZONA STATE UNIVERSITY	3,615	181	540	30	13	297	253	2,301	0
66 BOSTON UNIVERSITY	3,500E	415I	441I	94I	101I	1,801I	292I	326I	30I
67 SUNY MARITIME COLLEGE	3,491E	53I	63I	24I	8I	975I	11I	294I	2,063I
68 WESTERN WASHINGTON ST COL	3,455	0	6	4	1	2,278	1	1,165	0
69 EARLHAM COLLEGE	3,448	0	1,622	0	304	1,014	508	0	0
70 VASSAR COLLEGE	3,382	0	9	5	0	3,357	8	3	0
TOTAL 1ST 70 INSTS.	663,022	37,537	72,499	15,039	13,921	410,206	33,789	48,474	31,557
71 UNIVERSITY OF DELAWARE	3,300	114	2,728	359	0	94	0	5	0
72 UNIV OF KENTUCKY ALL CAM	3,296	524	327	0	0	545	0	1,896	4
73 YESHIVA UNIVERSITY	3,234	0	286	0	0	2,944	4	0	0
74 UNIVERSITY OF NEW MEXICO	3,225	75	95	18	0	2,138	443	90	366
75 U OF CAL SANTA BARBARA	3,154	0	102	60	0	0	0	2,992	0
76 KNOX COLLEGE	3,142E	25I	1,385I	57I	269I	932I	442I	20I	12I
77 COLORADO STATE UNIVERSITY	3,043	414	194	67	10	1,662	9	381	306
78 U OF ILL MEDICAL CENTER	3,030	0	8	0	0	3,022	0	0	0
79 OREGON STATE UNIVERSITY	3,027	317	237	1,749	13	597	2	23	89
80 INDIANA UNIV-BLOOMINGTON	3,014	0	2,504	53	8	185	67	56	141
TOTAL 1ST 80 INSTS.	694,487	39,006	80,365	17,402	14,221	422,325	34,756	53,937	32,475
81 MARQUETTE UNIVERSITY	2,912	98	2,071	0	0	732	9	2	0
82 U OF CAL IRVINE	2,703	405	0	0	453	1,508	0	337	0
83 U OF NEB MED C AT OMAHA	2,693E	0	0	0	0	2,693E	0	0	0
84 UNIVERSITY OF KANSAS	2,620	290	295	237	17	942	24	699	115
85 UNIVERSITY OF VIRGINIA	2,586	416	253	205	9	1,482	24	87	110
86 ALBANY MED COL OF UNION U	2,519	0	0	0	0	2,519	0	0	0
87 MEDICAL COLL OF GEORGIA	2,518	0	0	0	0	2,518	0	0	0
88 BAYLOR COLLEGE OF MED	2,370	0	0	0	0	2,370	0	0	0
89 UNIV OF MD COLLEGE PARK	2,279	584	698	150	104	684	14	23	22
90 U TEX GALVESTON MED BRAN	2,141	0	0	0	0	2,141	0	0	0
TOTAL 1ST 90 INSTS.	719,828	40,799	83,682	17,994	14,804	439,914	34,828	55,085	32,722
91 UNIV OF MISSOURI ROLLA	2,107	0	2,059	0	48	0	0	0	0
92 UNIVERSITY OF PITTSBURGH	2,066	89	514	14	10	1,289	41	54	55
93 U OF CAL BERKELEY	2,026	0	0	162	274	1,500	0	90	0
94 UNIVERSITY OF OREGON	2,006	0	232	22	0	1,626	94	7	25
95 CAMDEN COUNTY COLLEGE	2,000E	548I	517I	0I	173I	424I	60I	189I	89I
96 COLUMBIA UNIV MAIN DIV	1,955	34	242	262	0	859	0	430	128
97 S ILLINOIS U EDWARDSVILLE	1,766	23	71	0	4	1,636	11	21	0
98 U PUERTO RICO SAN JUAN	1,760E	0	0	0	0	1,760E	0	0	0
99 WILKES COLLEGE	1,700	1,500	100	0	0	100	0	0	0
00 WOODS HOLE OCNGRPHIC INST	1,695	544	0	1,067	0	84	0	0	0
TOTAL 1ST 100 INSTS.	738,909	43,537	87,417	19,521	15,313	449,192	35,034	55,876	33,019

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-39.
CONTINUED

CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 OHIO UNIVERSITY	1,645	19	197	0	1	612	578	238	0
102 ST LOUIS UNIV	1,645	20	11	9	0	1,575	0	0	30
103 U PUERTO RICO MAYAGUEZ	1,632	951	231	450	0	0	0	0	0
104 LA ST U BATON ROUGE	1,620	61	12	51	48	1,431	16	1	0
105 SOUTHERN UNIV	1,565E	24I	29I	10I	4I	436I	5I	132I	925I
106 S DAK SCH MINES & TECH	1,564	1,049	418	90	3	1	0	2	1
107 PRINCETON UNIVERSITY	1,561	435	627	94	2	276	102	25	0
108 FLORIDA STATE UNIVERSITY	1,512	19	408	205	339	216	127	57	141
109 UNIV OF ILL CHICAGO CIR	1,440	358	499	90	63	275	68	87	0
110 COL OF MED & DENT OF N J	1,411	0	0	0	0	1,411	0	0	0
TOTAL 1ST 110 INSTS.	754,504	46,473	89,849	20,520	15,773	455,425	35,930	56,418	34,116
111 CARNEGIE-MELLON UNIV	1,394	270	259	0	501	34	20	14	296
112 THE UNIVERSITY OF AKRON	1,314	33	1,183	21	3	52	8	14	0
113 NORTHWESTERN UNIVERSITY	1,227	15	147	9	0	620	25	4	407
114 SUNY BINGHAMTON	1,214E	63I	142I	40I	27I	780I	41I	79I	42I
115 WEST VIRGINIA UNIVERSITY	1,194	428	72	14	5	641	25	9	0
116 CUNY MT SINAI SCH OF MED	1,188	0	0	0	0	1,188	0	0	0
117 WASHINGTON STATE UNIV	1,183	338	141	57	11	567	3	13	53
118 SUNY COLLEGE GENESEO	1,161	0	263	0	111	155	158	474	0
119 U OF CAL DAVIS	1,137	0	691	0	0	446	0	0	0
120 FLORIDA INST OF TECH	1,137	30	12	1,013	11	69	0	0	2
TOTAL 1ST 120 INSTS.	766,653	47,650	92,759	21,674	16,442	459,977	36,210	57,025	34,916
121 UNIVERSITY OF CINCINNATI	1,110	142	104	33	0	806	4	1	20
122 MICHIGAN STATE UNIVERSITY	1,106	40	306	27	3	691	8	19	12
123 WSTRN KENTUCKY UNIVERSITY	1,077	30	14	940	8	37	13	2	33
124 CASE WESTERN RESERVE UNIV	1,053	217	211	2	0	616	0	7	0
125 RICE UNIVERSITY	1,023	250	148	93	85	134	0	238	75
126 SUNY BUFFALO	1,009	42	42	10	5	900	1	4	5
127 ROCKEFELLER UNIVERSITY	1,005	0	169	0	6	730	100	0	0
128 CENTRAL PIEDMONT CMTY COL	981E	270I	253I	0I	86I	208I	29I	92I	43I
129 U TENNESSEE KNOXVILLE	974	317	226	25	4	326	35	36	5
130 GEORGIA INSTITUTE OF TECH	947	517	298	38	65	27	1	1	0
TOTAL 1ST 130 INSTS.	776,938	49,475	94,530	22,842	16,704	464,452	36,401	57,425	35,109
131 UNIV OF NEBRASKA - LNCLN	945	58	199	0	0	688	0	0	0
132 CLEMSON UNIVERSITY	928	65	14	13	0	720	0	11	105
133 HOWARD UNIVERSITY	900E	108I	113I	24I	25I	463I	76I	84I	7I
134 BROWN UNIVERSITY	862	184	139	48	91	335	34	3	28
135 WRIGHT STATE UNIV	850	13	163	447	31	174	18	0	4
136 U OF CAL SANTA CRUZ	837	443	0	0	0	0	0	394	0
137 UNIV OF NEW HAMPSHIRE	835	78	78	60	0	534	51	20	14
138 UNIV OF MISSISSIPPI	816	59	42	0	3	587	113	12	0
139 TEXAS TECH UNIVERSITY	797	112	115	38	8	240	278	6	0
140 INDIANA UNIVERSITY-PURDUE	795	140	6	0	1	565	0	79	4
TOTAL 1ST 140 INSTS.	785,503	50,735	95,399	23,472	16,863	468,758	36,971	58,034	35,271
141 VALPARAISO UNIVERSITY	791	34	661	2	0	85	5	4	0
142 U OF TEX M D ANDERSON HOS	788	0	86	0	14	688	0	0	0
143 WESLEYAN UNIVERSITY	772	0	251	1	427	87	3	0	3
144 MISSISSIPPI STATE UNIV	765	158	20	1	1	579	4	2	0
145 ANDREWS UNIVERSITY	757	109	244	0	109	291	0	4	0
[illegible]	756	756	0	0	0	0	0	0	0

102 ST LOUIS UNIV	1,645	20	11	9	0	1,575	0	0	30
103 U PUERTO RICO MAYAGUEZ	1,632	951	231	450	0	0	0	0	0
104 LA ST U BATON ROUGE	1,620	61	12	51	48	1,431	16	1	0
105 SOUTHERN UNIV	1,565E	241	291	101	41	436I	51	132I	925I
106 S DAK SCH MINES & TECH	1,564	1,049	418	90	3	1	0	2	1
107 PRINCETON UNIVERSITY	1,561	435	627	94	2	276	102	25	0
108 FLORIDA STATE UNIVERSITY	1,512	19	408	205	339	216	127	57	141
109 UNIV OF ILL CHICAGO CIR	1,440	358	499	90	63	275	68	87	0
110 COL OF MED & DENT OF N J	1,411	0	0	0	0	1,411	0	0	0
TOTAL 1ST 110 INSTS.	754,504	46,473	89,849	20,520	15,773	455,425	35,930	56,418	34,116
111 CARNEGIE-MELLON UNIV	1,394	270	259	0	501	34	20	14	296
112 THE UNIVERSITY OF AKRON	1,314	33	1,183	21	3	52	8	14	0
113 NORTHWESTERN UNIVERSITY	1,227	15	147	9	0	620	25	4	407
114 SUNY BINGHAMTON	1,214E	63I	142I	40I	27I	780I	41I	79I	42I
115 WEST VIRGINIA UNIVERSITY	1,194	428	72	14	5	641	25	9	0
116 CUNY MT SINAI SCH OF MED	1,188	0	0	0	0	1,188	0	0	0
117 WASHINGTON STATE UNIV	1,183	338	141	57	11	567	3	13	53
118 SUNY COLLEGE GENESEO	1,161	0	263	0	111	155	158	474	0
119 U OF CAL DAVIS	1,137	0	691	0	0	446	0	0	0
120 FLORIDA INST OF TECH	1,137	30	12	1,013	11	69	0	0	2
TOTAL 1ST 120 INSTS.	766,653	47,650	92,759	21,674	16,442	459,977	36,210	57,025	34,916
121 UNIVERSITY OF CINCINNATI	1,110	142	104	33	0	806	4	1	20
122 MICHIGAN STATE UNIVERSITY	1,106	40	306	27	3	691	8	19	12
123 WSTRN KENTUCKY UNIVERSITY	1,077	30	14	940	8	37	13	2	33
124 CASE WESTERN RESERVE UNIV	1,053	217	211	2	0	616	0	7	0
125 RICE UNIVERSITY	1,023	250	148	93	85	134	0	238	75
126 SUNY BUFFALO	1,009	42	42	10	5	900	1	4	5
127 ROCKEFELLER UNIVERSITY	1,005	0	169	0	6	730	100	0	0
128 CENTRAL PIEDMONT CMTY COL	981E	270I	253I	0I	86I	208I	29I	92I	43I
129 U TENNESSEE KNOXVILLE	974	317	226	25	4	326	35	36	5
130 GEORGIA INSTITUTE OF TECH	947	517	298	38	65	27	1	1	0
TOTAL 1ST 130 INSTS.	776,938	49,475	94,530	22,842	16,704	464,452	36,401	57,425	35,109
131 UNIV OF NEBRASKA - LNCLN	945	58	199	0	0	688	0	0	0
132 CLEMSON UNIVERSITY	928	65	14	13	0	720	0	11	105
133 HOWARD UNIVERSITY	900E	108I	113I	24I	25I	463I	76I	84I	7I
134 BROWN UNIVERSITY	862	184	139	48	91	335	34	3	28
135 WRIGHT STATE UNIV	850	13	163	447	31	174	18	0	4
136 U OF CAL SANTA CRUZ	837	443	0	0	0	0	0	394	0
137 UNIV OF NEW HAMPSHIRE	835	78	78	60	0	534	51	20	14
138 UNIV OF MISSISSIPPI	816	59	42	0	3	587	113	12	0
139 TEXAS TECH UNIVERSITY	797	112	115	38	8	240	278	6	0
140 INDIANA UNIVERSITY-PURDUE	795	140	6	0	1	565	0	79	4
TOTAL 1ST 140 INSTS.	785,503	50,735	95,399	23,472	16,863	468,758	36,971	58,034	35,271
141 VALPARAISO UNIVERSITY	791	34	661	2	0	85	5	4	0
142 U OF TEX M D ANDERSON HOS	788	0	86	0	14	688	0	0	0
143 WESLEYAN UNIVERSITY	772	0	251	1	427	87	3	0	3
144 MISSISSIPPI STATE UNIV	765	158	20	1	1	579	4	2	0
145 ANDREWS UNIVERSITY	757	109	244	0	109	291	0	4	0
146 LA ST U NEW ORLEANS	754	754	0	0	0	0	0	0	0
147 U PUERTO RICO RIO PIEDRAS	750E	38I	88I	25I	16I	483I	25I	49I	26I
148 TULANE UNIVERSITY	740	42	45	3	11	614	20	4	1
149 LOWELL TECHNOLOGICAL INST	723	0	723	0	0	0	0	0	0
150 UNIV OF VT & ST AGRIC COL	715	0	121	0	0	587	0	7	0
TOTAL 1ST 150 INSTS.	793,058	51,870	97,638	23,504	17,441	472,172	37,028	58,104	35,301
ALL OTHER INSTITUTIONS	53,227	8,238	12,122	3,496	2,816	18,588	2,707	2,968	2,312

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-40. FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
UNITED STATES, TOTAL	227,259	15,960	24,629	5,846	3,026	162,177	5,127	5,281	5,213
1 UNIVERSITY OF FLORIDA	14,319	182	87	75	286	13,679	4	6	0
2 UNIVERSITY OF MINNESOTA	12,083	233	230	33	17	10,991	82	300	197
3 UNIVERSITY OF CONNECTICUT	8,910	80	22	51	457	7,813	475	12	0
4 UNIV OF WISCONSIN-MADISON	8,735	204	907	308	7	5,003	331	1,362	613
5 PENNSYLVANIA STATE UNIV	5,658	77	176	0	0	5,379	23	3	0
6 DUKE UNIVERSITY	5,645I	761I	842I	226I	111I	3,297I	201I	116I	91I
7 GEORGE WASHINGTON UNIV	5,401	82	9	18	167	5,029	9	70	17
8 U OF OREGON MED SCHOOL	4,863E	0	0	0	0	4,863E	0	0	0
9 TEMPLE UNIVERSITY	4,657	16	47	0	0	2,829	951	814	0
10 U TEX HLTH SCI CTR DALLAS	4,629	0	0	0	0	4,629	0	0	0
TOTAL 1ST 10 INSTS.	74,900	1,635	2,320	711	1,045	63,512	2,076	2,683	918
11 UNIVERSITY OF COLORADO	4,601	63	600	50	16	3,392	100	120	260
12 UNIVERSITY OF HAWAII	4,580	0	1,221	0	0	3,359	0	0	0
13 UNIV ILLINOIS URBANA	4,217	1,061	804	156	0	667	25	26	1,478
14 UNIV OF SOUTH ALABAMA	4,210	0	0	0	0	4,210	0	0	0
15 UNIV OF MASS MED SCHOOL	3,804	0	0	0	0	3,804	0	0	0
16 UNIV OF NC AT CHAPEL HILL	3,264	81	50	0	15	2,785	64	13	254
17 STANFORD UNIVERSITY	3,220	552	1,272	148	20	1,157	30	41	0
18 U OF CAL LOS ANGELES	3,140	0	0	0	0	3,140	0	0	0
19 VIRGINIA COMMONWLTH UNIV	3,014	0	0	0	0	3,014	0	0	0
20 U OF MO K C	2,884	0	88	0	0	2,733	0	63	0
TOTAL 1ST 20 INSTS.	111,834	3,392	6,355	1,065	1,098	91,773	2,297	2,946	3,910
21 UNIV ALABAMA BIRMINGHAM	2,881	0	1	0	0	2,508	0	372	0
22 MASS INST OF TECHNOLOGY	2,871	2,871	0	0	0	0	0	0	0
23 CALIFORNIA INST OF TECH	2,846	276	2,001	229	0	327	0	13	0
24 OHIO STATE UNIVERSITY	2,764	23	0	0	1	2,740	0	0	0
25 UNIV OF PENNSYLVANIA	2,630	201	502	0	0	1,455	9	76	387
26 CORNELL UNIVERSITY	2,619	695	690	3	0	1,209	15	6	1
27 UNIVERSITY OF WASHINGTON	2,441	0	0	136	0	2,305	0	0	0
28 YALE UNIVERSITY	2,410	134	788	38	13	1,395	28	14	0
29 UNIVERSITY OF MICHIGAN	2,356	411	321	78	32	1,347	48	119	0
30 U TEX HLTH SCI CR HOUSTON	2,149	0	0	0	0	2,149	0	0	0
TOTAL 1ST 30 INSTS.	137,801	8,003	10,658	1,549	1,142	107,208	2,397	3,546	3,298
31 NEW YORK UNIVERSITY	2,079	0	62	0	0	1,426	591	0	0
32 PURDUE UNIV ALL CAMPUSES	2,011	381	586	97	111	752	25	36	25
33 JOHNS HOPKINS UNIVERSITY	1,929	17	267	369	0	1,251	22	3	0
34 U OF WIS MILWAUKEE	1,893	42	31	39	0	1,701	5	11	64
35 YESHIVA UNIVERSITY	1,862	0	110	0	0	1,749	3	0	0
36 WASHINGTON UNIV ST LOUIS	1,763	231	93	1	0	1,399	36	3	0
37 UNIVERSITY OF IOWA	1,659	0	0	0	0	1,659	0	0	0
38 UNIV OF STHRN CALIFORNIA	1,592	507	51	47	1	840	90	56	0
39 WOODS HOLE OCNGRPHIC INST	1,577	544	0	959	0	74	0	0	0
40 UNIVERSITY OF GEORGIA	1,560	0	52	31	11	1,437	28	1	0
TOTAL 1ST 40 INSTS.	155,726	9,725	11,908	3,092	1,265	119,496	3,197	3,656	3,387
41 UNIVERSITY OF ROCHESTER	1,555	66	666	0	3	781	32	0	7
42 UNIVERSITY OF OREGON	1,548	0	228	20	0	1,227	43	5	25

	UNITED STATES, TOTAL	227,259	15,960	24,629	5,846	3,026	162,177	5,127	5,281	5,213
1	UNIVERSITY OF FLORIDA	14,319	182	87	75	286	13,679	4	6	0
2	UNIVERSITY OF MINNESOTA	12,083	233	230	33	17	10,991	82	300	197
3	UNIVERSITY OF CONNECTICUT	8,910	80	22	51	457	7,813	475	12	0
4	UNIV OF WISCONSIN-MADISON	8,735	204	907	308	7	5,003	331	1,362	613
5	PENNSYLVANIA STATE UNIV	5,658	77	176	0	0	5,379	23	3	0
6	DUKE UNIVERSITY	5,645I	761I	842I	226I	111I	3,297I	201I	116I	91I
7	GEORGE WASHINGTON UNIV	5,401	82	9	18	167	5,029	9	70	17
8	U OF OREGON MED SCHOOL	4,863E	0	0	0	0	4,863E	0	0	0
9	TEMPLE UNIVERSITY	4,657	15	47	0	0	2,829	951	814	0
10	U TEX HLTH SCI CTR DALLAS	4,629	0	0	0	0	4,629	0	0	0
	TOTAL 1ST 10 INSTS.	74,900	1,635	2,320	711	1,045	63,512	2,076	2,683	918
11	UNIVERSITY OF COLORADO	4,601	63	600	50	16	3,392	100	120	260
12	UNIVERSITY OF HAWAII	4,580	0	1,221	0	0	3,359	0	0	0
13	UNIV ILLINOIS URBANA	4,217	1,061	804	156	0	667	25	26	1,478
14	UNIV OF SOUTH ALABAMA	4,210	0	0	0	0	4,210	0	0	0
15	UNIV OF MASS MED SCHOOL	3,804	0	0	0	0	3,804	0	0	0
16	UNIV OF NC AT CHAPEL HILL	3,264	81	50	0	15	2,785	66	13	254
17	STANFORD UNIVERSITY	3,220	552	1,272	148	20	1,157	30	41	0
18	U OF CAL LOS ANGELES	3,140	0	0	0	0	3,140	0	0	0
19	VIRGINIA COMMONWLTH UNIV	3,014	0	0	0	0	3,014	0	0	0
20	U OF MO K C	2,884	0	88	0	0	2,733	0	63	0
	TOTAL 1ST 20 INSTS.	111,834	3,392	6,355	1,065	1,096	91,773	2,297	2,946	2,910
21	UNIV ALABAMA BIRMINGHAM	2,881	0	1	0	0	2,508	0	372	0
22	MASS INST OF TECHNOLOGY	2,871	2,871	0	0	0	0	0	0	0
23	CALIFORNIA INST OF TECH	2,846	276	2,001	229	0	327	0	13	0
24	OHIO STATE UNIVERSITY	2,764	23	0	0	1	2,740	0	0	0
25	UNIV OF PENNSYLVANIA	2,630	201	502	0	0	1,455	9	76	387
26	CORNELL UNIVERSITY	2,619	695	690	3	0	1,209	15	6	1
27	UNIVERSITY OF WASHINGTON	2,441	0	0	136	0	2,305	0	0	0
28	YALE UNIVERSITY	2,410	134	788	38	13	1,395	28	14	0
29	UNIVERSITY OF MICHIGAN	2,356	411	321	78	32	1,347	48	119	0
30	U TEX HLTH SCI CR HOUSTON	2,149	0	0	0	0	2,149	0	0	0
	TOTAL 1ST 30 INSTS.	137,801	8,003	10,658	1,549	1,142	107,208	2,397	3,546	3,298
31	NEW YORK UNIVERSITY	2,079	0	62	0	0	1,426	591	0	0
32	PURDUE UNIV ALL CAMPUSES	2,011	381	584	97	111	752	25	36	25
33	JOHNS HOPKINS UNIVERSITY	1,929	17	267	369	0	1,251	22	3	0
34	U OF WIS MILWAUKEE	1,893	42	31	39	0	1,701	5	11	64
35	YESHIVA UNIVERSITY	1,862	0	110	0	0	1,749	3	0	0
36	WASHINGTON UNIV ST LOUIS	1,763	231	93	1	0	1,399	36	3	0
37	UNIVERSITY OF IOWA	1,659	0	0	0	0	1,659	0	0	0
38	UNIV OF STHRN CALIFORNIA	1,592	507	51	47	1	840	90	56	0
39	WOODS HOLE OCNGRPHIC INST	1,577	544	0	959	0	74	0	0	0
40	UNIVERSITY OF GEORGIA	1,560	0	52	31	11	1,437	28	1	0
	TOTAL 1ST 40 INSTS.	155,726	9,725	11,908	3,092	1,265	119,496	3,197	3,656	3,387
41	UNIVERSITY OF ROCHESTER	1,555	86	666	0	3	781	32	0	7
42	UNIVERSITY OF OREGON	1,548	0	228	20	0	1,227	43	5	25
43	KANSAS ST UNIVERSITY	1,518	49	22	13	0	1,366	5	9	54
44	INDIANA UNIV-BLOOMINGTON	1,489	0	1,308	21	0	37	54	17	52
45	U OF ILL MEDICAL CENTER	1,359	0	6	0	0	1,353	0	0	0
46	U OF NEB MED C AT OMAHA	1,341E	0	0	0	0	1,341E	0	0	0
47	UNIV OF TEXAS AT AUSTIN	1,324	390	324	5	3	222	22	14	344
48	ALBANY MED COL OF UNION U	1,322	0	0	0	0	1,322	0	0	0
49	U TEX HLTH SCI CR SAN ANT	1,320	0	0	0	0	1,320	0	0	0
50	VANDERBILT UNIVERSITY	1,291	0	0	0	0	1,291	0	0	0
	TOTAL 1ST 50 INSTS.	169,793	10,230	14,462	3,151	1,271	129,756	3,353	3,701	3,869

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-40. FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973
CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 NEW YORK MEDICAL COLLEGE	1,290	0	0	0	0	1,290	0	0	0
52 UNIVERSITY OF ARIZONA	1,254	43	345	63	59	731	2	11	0
53 UNIVERSITY OF KANSAS	1,252	124	219	8	12	714	12	142	21
54 BAYLOR COLLEGE OF MED	1,209	0	0	0	0	1,209	0	0	0
55 ST LOUIS UNIV	1,204	4	9	8	0	1,153	0	0	30
56 CARLHAM COLLEGE	1,125	0	529	0	101	326	169	0	0
57 BOSTON UNIVERSITY	1,096I	148I	163I	43I	22I	641I	39I	23I	17I
58 NORTHWESTERN UNIVERSITY	1,088	14	124	8	0	506	25	4	407
59 UNIVERSITY OF MIAMI	1,078	4	31	345	0	696	2	0	0
60 UNIVERSITY OF NEW MEXICO	1,065	0	7	0	0	1,035	0	23	0
TOTAL 1ST 60 INSTS.	181,454	10,567	15,889	3,626	1,465	138,057	3,602	3,904	4,344
61 UNIVERSITY OF UTAH	1,036	61	215	6	0	719	21	14	0
62 HARVARD UNIVERSITY	1,007	0	0	0	0	1,007	0	0	0
63 KNOX COLLEGE	1,002I	0I	467I	18I	77I	288I	147I	5I	0I
64 UNIVERSITY OF PITTSBURGH	987	16	386	10	6	541	21	1	0
65 COLORADO STATE UNIVERSITY	960	214	120	48	0	428	8	0	142
66 SUNY BUFFALO	934	25	32	3	0	865	1	4	4
67 UNIV OF MD COLLEGE PARK	920	99	484	94	9	200	14	3	17
68 UNIVERSITY OF VIRGINIA	899	73	86	54	0	606	9	1	70
69 MICHIGAN STATE UNIVERSITY	897	26	304	13	2	523	7	19	3
70 IOWA ST U OF SCI & TECH	884	85	37	0	0	519	0	243	0
TOTAL 1ST 70 INSTS.	190,974	11,166	18,020	3,872	1,559	143,753	3,830	4,194	4,580
71 RUTGERS THE STATE UNIV	876	33	133	30	261	284	51	20	64
72 SUNY MARITIME COLLEGE	849I	25I	24I	1I	2I	773I	1I	13I	10I
73 CARNEGIE-MELLON UNIV	831	117	154	0	497	20	14	9	20
74 WAYNE STATE UNIVERSITY	826	58	61	18	0	682	7	0	0
75 ARIZONA STATE UNIVERSITY	797	19	254	16	5	74	145	284	0
76 MARQUETTE UNIVERSITY	779	77	53	0	0	645	3	1	0
77 FLORIDA STATE UNIVERSITY	759	2	347	149	0	178	56	27	0
78 OREGON STATE UNIVERSITY	743	44	92	403	2	162	0	0	40
79 BROWN UNIVERSITY	716	167	71	47	85	296	28	2	20
80 UNIV OF VT & ST AGRIC COL	708	0	121	0	0	587	0	0	0
TOTAL 1ST 80 INSTS.	198,858	11,708	19,330	4,536	2,411	147,754	4,135	4,550	4,734
81 CASE WESTERN RESERVE UNIV	658	133	140	2	0	379	0	4	0
82 WEST VIRGINIA UNIVERSITY	613	338	5	0	0	260	10	0	0
83 U PUERTO RICO SAN JUAN	605E	0	0	0	0	605E	0	0	0
84 LA ST U BATON ROUGE	604	25	7	26	0	532	14	0	0
85 UNIVERSITY OF ALASKA	579	0	293	249	0	15	0	22	0
86 UNIVERSITY OF LOUISVILLE	564	23	9	0	0	510	11	11	0
87 WILKES COLLEGE	560	500	30	0	0	30	0	0	0
88 WAKE FOREST UNIVERSITY	554	0	10	0	0	542	2	0	0
89 PRINCETON UNIVERSITY	547	119	322	6	0	56	43	1	0
90 TULANE UNIVERSITY	504	39	15	0	10	424	16	0	0
TOTAL 1ST 90 INSTS.	204,646	12,885	20,161	4,819	2,421	150,807	4,231	4,588	4,734
91 COL OF MED & DENT OF N J	468	0	0	0	0	468	0	0	0
92 U OF TEX M D ANDERSON HOS	457	0	45	0	12	400	0	0	0
93 RUSH MEDICAL COLLEGE	443	0	0	0	0	443	0	0	0
94 UNIV OF MASS AT AMHERST	431	68	69	85	1	151	11	46	0

			ENGINEERING	SCIENCES	MENTAL	MATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51	NEW YORK MEDICAL COLLEGE	1,290	0	0	0	0	1,290	0	0	0
52	UNIVERSITY OF ARIZONA	1,254	43	345	63	59	731	2	11	0
53	UNIVERSITY OF KANSAS	1,252	124	219	8	12	714	12	142	21
54	BAYLOR COLLEGE OF MED	1,209	0	0	0	0	1,209	0	0	0
55	ST LOUIS UNIV	1,204	4	9	8	0	1,153	0	0	30
56	EARLHAM COLLEGE	1,125	0	529	0	101	326	169	0	0
57	BOSTON UNIVERSITY	1,096I	148I	163I	43I	22I	641I	39I	23I	17I
58	NORTHWESTERN UNIVERSITY	1,088	14	124	8	0	506	25	4	407
59	UNIVERSITY OF MIAMI	1,078	4	31	345	0	696	2	0	0
60	UNIVERSITY OF NEW MEXICO	1,065	0	7	0	0	1,035	0	23	0
	TOTAL 1ST 60 INSTS.	181,454	10,567	15,889	3,626	1,465	138,057	3,602	3,904	4,344
61	UNIVERSITY OF UTAH	1,036	61	215	6	0	719	21	14	0
62	HARVARD UNIVERSITY	1,007	0	0	0	0	1,007	0	0	0
63	KNOX COLLEGE	1,002I	0I	467I	18I	77I	288I	147I	5I	0I
64	UNIVERSITY OF PITTSBURGH	981	16	386	10	6	541	21	1	0
65	COLORADO STATE UNIVERSITY	960	214	120	48	0	428	8	0	142
66	SUNY BUFFALO	934	25	32	3	0	865	1	4	4
67	UNIV OF MD COLLEGE PARK	920	99	484	94	9	200	14	3	17
68	UNIVERSITY OF VIRGINIA	899	73	86	54	0	605	9	1	70
69	MICHIGAN STATE UNIVERSITY	897	26	304	13	2	523	7	19	3
70	IOWA ST U OF SCI & TECH	884	85	37	0	0	519	0	243	0
	TOTAL 1ST 70 INSTS.	190,974	11,166	18,020	3,872	1,559	143,753	3,830	4,194	4,580
71	RUTGERS THE STATE UNIV	876	33	133	30	261	284	51	20	64
72	SUNY MARITIME COLLEGE	849I	25I	24I	1I	2I	773I	1I	13I	10I
73	CARNEGIE-MELLON UNIV	831	117	154	0	497	20	14	9	20
74	WAYNE STATE UNIVERSITY	826	58	61	18	0	682	7	0	0
75	ARIZONA STATE UNIVERSITY	797	19	254	16	5	74	145	284	0
76	MARQUETTE UNIVERSITY	779	77	53	0	0	645	3	1	0
77	FLORIDA STATE UNIVERSITY	759	2	347	149	0	178	56	27	0
78	OREGON STATE UNIVERSITY	743	44	92	403	2	162	0	0	40
79	BROWN UNIVERSITY	716	167	71	47	85	296	28	2	20
80	UNIV OF VT & ST AGRIC COL	708	0	121	0	0	587	0	0	0
	TOTAL 1ST 80 INSTS.	198,858	11,708	19,330	4,536	2,411	147,454	4,135	4,550	4,734
81	CASE WESTERN RESERVE UNIV	658	133	140	2	0	379	0	4	0
82	WEST VIRGINIA UNIVERSITY	613	338	5	0	0	260	10	0	0
83	U PUERTO RICO SAN JUAN	605E	0	0	0	0	605E	0	0	0
84	LA ST U BATON ROUGE	604	25	7	26	0	532	14	0	0
85	UNIVERSITY OF ALASKA	579	0	293	249	0	15	0	22	0
86	UNIVERSITY OF LOUISVILLE	564	23	9	0	0	510	11	11	0
87	WILKES COLLEGE	560	500	30	0	0	30	0	0	0
88	WAKE FOREST UNIVERSITY	554	0	10	0	0	542	2	0	0
89	PRINCETON UNIVERSITY	547	119	322	6	0	56	43	1	0
90	TULANE UNIVERSITY	504	39	15	0	10	424	16	0	0
	TOTAL 1ST 90 INSTS.	204,646	12,885	20,161	4,819	2,421	150,807	4,231	4,588	4,734
91	COL OF MED & DENT OF N J	468	0	0	0	0	468	0	0	0
92	U OF TEX M D ANDERSON HOS	457	0	45	0	12	400	0	0	0
93	RUSH MEDICAL COLLEGE	443	0	0	0	0	443	0	0	0
94	UNIV OF MASS AT AMHERST	431	68	69	85	1	151	11	46	0
95	RENSSELAER POLY INST	427E	333E	55E	8E	0	9E	0	0	22E
96	SUNY DOWNSTATE MED CTR	402	0	0	0	0	402	0	0	0
97	U TEX GALVESTON MED BRAN	397	0	0	0	0	397	0	0	0
98	SOUTHERN UNIV	381I	12I	11I	0I	1I	346I	0I	6I	5I
99	UNIV OF MISSISSIPPI	379	7	33	0	0	233	106	0	0
100	UNIVERSITY OF CINCINNATI	374	53	34	4	0	278	0	0	5
	TOTAL 1ST 100 INSTS.	208,805	13,358	20,408	4,916	2,435	153,934	4,348	4,640	4,766

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

TABLE B-40. FEDERALLY FINANCED CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION IN DESCENDING ORDER OF AMOUNTS, BY INSTITUTION AND FIELD OF SCIENCE: FY 1973
CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FIELD OF SCIENCE							
		ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL	MATHEMATICS	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 CUNY MT SINAI SCH OF MED	365	0	0	0	0	365	0	0	0
102 INDIANA UNIVERSITY-PURDUE	353	0	2	0	0	351	0	0	0
103 GEORGETOWN UNIVERSITY	330	0	38	0	260	1	2	29	0
104 GEORGIA INSTITUTE OF TECH	329	113	146	7	35	27	1	0	0
105 UNIVERSITY OF MONTANA	328E	0	123E	121E	0	83E	0	1E	0
106 OHIO UNIVERSITY	325	10	80	0	0	142	93	0	0
107 SUNY BINGHAMTON	324I	13I	26I	7I	3I	253I	5I	8I	9I
108 SUNY UPSTATE MEDICAL CTR	317	0	0	0	0	317	0	0	0
109 WASHINGTON STATE UNIV	316	101	51	0	0	149	1	3	11
110 UNIV OF MAINE ORONO	306	55	157	24	0	70	0	0	0
TOTAL 1ST 110 INSTS.	212,098	13,650	21,031	5,075	2,733	155,692	4,450	4,681	4,786
111 U TENNESSEE KNOXVILLE	282	82	42	2	1	133	16	5	1
112 HOWARD UNIVERSITY	282I	39I	42I	11I	5I	165I	10I	6I	4I
113 ROCKEFELLER UNIVERSITY	279	0	0	0	0	279	0	0	0
114 UNIV OKLAHOMA	249	43	34	15	3	150	1	1	2
115 SUNY COLLEGE BUFFALO	246	0	5	174	0	63	4	0	0
116 UTAH STATE UNIVERSITY	242	47	2	20	12	126	3	5	27
117 MONTANA STATE UNIVERSITY	232	106	36	3	0	86	0	0	1
118 UNIVERSITY OF NOTRE DAME	231	52	73	0	0	102	0	4	0
119 CLEMSON UNIVERSITY	226	20	9	0	0	190	0	0	7
120 UNIV OF NEW HAMPSHIRE	225	43	67	15	0	62	38	0	0
TOTAL 1ST 120 INSTS.	214,592	14,082	21,341	5,315	2,754	157,048	4,522	4,702	4,828
121 RICE UNIVERSITY	221	85	103	19	0	14	0	0	0
122 BELKNAP COLLEGE INC	220I	0I	103I	4I	16I	63I	32I	2I	0I
123 S ILLINOIS U EDWARDSVILLE	214	0	0	0	0	202	0	12	0
124 CAMDEN COUNTY COLLEGE	212I	62I	54I	0I	23I	50I	5I	12I	6I
125 POLYTECHNIC INST OF N Y	206	112	94	0	0	0	0	0	0
126 UNIV OF NORTH DAKOTA	202	19	5	8	0	164	0	2	4
127 UNIV OF MD BALTIMORE	200	0	0	0	0	200	0	0	0
128 U PUERTO RICO RIO PIEDRAS	200I	7I	16I	5I	2I	157I	3I	5I	5I
129 UNIV OF SOUTH FLORIDA	199	3	70	0	0	68	3	0	55
130 U PUERTO RICO MAYAGUEZ	197	171	9	17	0	0	0	0	0
TOTAL 1ST 130 INSTS.	216,663	14,541	21,795	5,368	2,795	157,966	4,565	4,735	4,898
131 MEDICAL COLL OF GEORGIA	194	0	0	0	0	194	0	0	0
132 CARSON NEWMAN COLLEGE	191I	0I	89I	3I	15I	55I	28I	1I	0I
133 a/	185C	16	136	1	1	24	7	0	0
134 MISSISSIPPI STATE UNIV	180	20	10	0	0	150	0	0	0
135 BAYLOR COL OF DENTISTRY	171	0	0	0	0	171	0	0	0
136 UNIVERSITY OF CHICAGO	169	0	0	0	0	163	0	6	0
137 WESLEYAN UNIVERSITY	167	0	111	1	0	53	2	0	0
138 UNIV OF NEVADA - RENO	165	3	2	125	0	0	4	31	0
139 UNIVERSITY OF DENVER	164	16	90	0	1	41	3	7	6
140 ILLINOIS INST OF TECH	162	95	60	1	0	6	0	0	0
TOTAL 1ST 140 INSTS.	218,411	14,691	22,293	5,499	2,812	158,823	4,609	4,780	4,904
141 UNIV OF MISSOURI COLUMBIA	159	0	153	0	0	6	0	0	0
142 UNIVERSITY OF TOLEDO	148	3	3	19	0	123	0	0	0
143 OLD DOMINION UNIVERSITY	147	20	82	0	0	37	6	2	0
144 UNIVERSITY OF IDAHO	141	9	4	11	0	89	0	2	26
145 UNIVERSITY OF ARKANSAS	136	39	51	0	0	34	1	11	0
146 TUFTS UNIVERSITY	136	13	108	0	0	8	7	0	0

102 INDIANA UNIVERSITY-PURDUE	353	0	2	0	0	351	0	0	0
103 GEORGETOWN UNIVERSITY	330	0	38	0	260	1	2	29	0
104 GEORGIA INSTITUTE OF TECH	329	113	146	7	35	27	1	0	0
105 UNIVERSITY OF MONTANA	328E	0	123E	121E	0	83E	0	7E	0
106 OHIO UNIVERSITY	325	10	80	0	0	142	93	0	0
107 SUNY BINGHAMTON	324I	13I	26I	7I	3I	253I	5I	8I	9I
108 SUNY UPSTATE MEDICAL CTR	317	0	0	0	0	317	0	0	0
109 WASHINGTON STATE UNIV	316	101	51	0	0	149	1	3	11
110 UNIV OF MAINE ORONO	306	55	157	24	0	70	0	0	0
TOTAL 1ST 110 INSTS.	212,098	13,650	21,031	5,075	2,733	155,692	4,450	4,681	4,786
111 U TENNESSEE KNOXVILLE	282	82	42	2	1	133	16	5	1
112 HOWARD UNIVERSITY	282I	39I	42I	11I	5I	165I	10I	6I	4I
113 ROCKEFELLER UNIVERSITY	279	0	0	0	0	279	0	0	0
114 UNIV OKLAHOMA	249	43	34	15	3	150	1	1	2
115 SUNY COLLEGE BUFFALO	246	0	5	174	0	63	4	0	0
116 UTAH STATE UNIVERSITY	242	47	2	20	12	126	3	5	27
117 MONTANA STATE UNIVERSITY	232	106	36	3	0	86	0	0	1
118 UNIVERSITY OF NOTRE DAME	231	52	73	0	0	102	0	4	0
119 CLEMSON UNIVERSITY	226	20	9	0	0	190	0	0	7
120 UNIV OF NEW HAMPSHIRE	225	43	67	15	0	62	38	0	0
TOTAL 1ST 120 INSTS.	214,592	14,082	21,341	5,315	2,754	157,048	4,522	4,702	4,828
121 RICE UNIVERSITY	221	85	103	19	0	14	0	0	0
122 BELKNAP COLLEGE INC	220I	0I	103I	4I	16I	63I	32I	2I	0I
123 S ILLINOIS U EDWARDSVILLE	214	0	0	0	0	202	0	12	0
124 CAMDEN COUNTY COLLEGE	212I	62I	54I	0I	23I	50I	5I	12I	6I
125 POLYTECHNIC INST OF N Y	206	112	94	0	0	0	0	0	0
126 UNIV OF NORTH DAKOTA	202	19	5	3	0	164	0	2	4
127 UNIV OF MD BALTIMORE	200	0	0	0	0	200	0	0	0
128 U PUERTO RICO RIO PIEDRAS	200I	7I	16I	5I	2I	157I	3I	5I	5I
129 UNIV OF SOUTH FLORIDA	199	3	70	0	0	68	3	0	55
130 U PUERTO RICO MAYAGUEZ	197	171	9	17	0	0	0	0	0
TOTAL 1ST 130 INSTS.	216,663	14,541	21,795	5,368	2,795	157,966	4,565	4,735	4,898
131 MEDICAL COLL OF GEORGIA	194	0	0	0	0	194	0	0	0
132 CARSON NEWMAN COLLEGE	191I	0I	89I	3I	15I	55I	28I	1I	0I
133 a/	185C	16	136	1	1	24	7	0	0
134 MISSISSIPPI STATE UNIV	180	20	10	0	0	150	0	0	0
135 BAYLOR COL OF DENTISTRY	171	0	0	0	0	171	0	0	0
136 UNIVERSITY OF CHICAGO	169	0	0	0	0	163	0	6	0
137 WESLEYAN UNIVERSITY	167	0	111	1	0	53	2	0	0
138 UNIV OF NEVADA - RENO	165	3	2	125	0	0	4	31	0
139 UNIVERSITY OF DENVER	164	16	90	0	1	41	3	7	6
140 ILLINOIS INST OF TECH	162	95	60	1	0	6	0	0	0
TOTAL 1ST 140 INSTS.	218,411	14,691	22,293	5,499	2,812	158,823	4,609	4,780	4,904
141 UNIV OF MISSOURI COLUMBIA	159	0	153	0	0	6	0	0	0
142 UNIVERSITY OF TOLEDO	148	3	3	19	0	123	0	0	0
143 OLD DOMINION UNIVERSITY	147	20	82	0	0	37	6	2	0
144 UNIVERSITY OF IDAHO	141	9	4	11	0	89	0	2	26
145 UNIVERSITY OF ARKANSAS	136	39	51	0	0	34	1	11	0
146 TUFTS UNIVERSITY	136	13	108	0	0	8	7	0	0
147 SAN DIEGO ST UNIVERSITY	135	3	11	1	0	16	104	0	0
148 THOM JEFFERSON UNIV HOSP	133	0	0	0	0	133	0	0	0
149 MED UNIV OF SO CAROLINA	130	0	0	0	0	130	0	0	0
150 THE MED COLL OF PENNA	130	0	0	0	0	130	0	0	0
TOTAL 1ST 150 INSTS.	219,806	14,778	22,705	5,530	2,812	159,529	4,727	4,795	4,930
ALL OTHER INSTITUTIONS	7,453	1,182	1,924	316	214	2,648	400	486	283

a/CONFIDENTAL

NOTE: Numbers followed by the letter "E" are estimates; those followed by "I" are imputations.

APPENDIX B
Reproduction of Survey Form

NSF FORM 411 OMB No. 99-R0279

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC ACTIVITIES OF INSTITUTIONS OF HIGHER EDUCATION

(Current and Capital Expenditures for Research, Development, and Instruction in the Sciences and Engineering, FY 1973)

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by October 31, 1973. Your cooperation in returning the survey questionnaires promptly is very important and will be appreciated.

Financial data are requested for the fiscal year which began on July 1, 1972, and ended on June 30, 1973, or your institution's equivalent fiscal year.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Please read the enclosed instructions before completing this form. Where exact data are not available, estimates are acceptable. Please complete all items; estimates by college officials will be better than NSF estimates. Enter "0" as an item total (lines 1100, 1200, 1300, etc., are item totals) rather than leave the total blank.

Name and address of institution:
(Please correct if name or address has changed)

Aggregate data from 621 universities and colleges. Excludes 23 university administered FFRDC'S.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. **Exclude** data for Federally Funded R&D Centers administered by universities. A list of these Centers is shown on page 3 of the Instructions and Definitions. A separate questionnaire will be mailed directly to each Center.

Please transfer the following data elements from your response to HEGIS Part B–Current Fund Expenditures FY 1973

Total Educational and General Expenditures		Instruction and Departmental Research		Total Separately Budgeted Research		Other Educational Expenditures
1.		2.		3.		4.
$ N/A HEGIS Part B Line 1	=	$ N/A HEGIS Part B Line 2	+	$ N/A HEGIS Part B Lines 4+5	+	$ N/A HEGIS Part B Line 3, 6 – 10

Please check the appropriate box so we can readily classify your organization.

1. Primary administrative control or affiliation of your institution:

11 12 13 20

91

186

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form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by October 31, 1973. Your cooperation in returning the survey questionnaires promptly is very important and will be appreciated.

Financial data are requested for the fiscal year which began on July 1, 1972, and ended on June 30, 1973, or your institution's equivalent fiscal year.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Please read the enclosed instructions before completing this form. Where exact data are not available, estimates are acceptable. Please complete all items; estimates by college officials will be better than NSF estimates. Enter "0" as an item total (lines 1100, 1200, 1300, etc., are item totals) rather than leave the total blank.

(Please correct if name or address has changed)

Aggregate data from 621 universities and colleges. Excludes 23 university administered FFRDC'S.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. **Exclude** data for Federally Funded R&D Centers administered by universities. A list of these Centers is shown on page 3 of the Instructions and Definitions. A separate questionnaire will be mailed directly to each Center.

Please transfer the following data elements from your response to HEGIS Part B–Current Fund Expenditures FY 1973

Total Educational and General Expenditures		Instruction and Departmental Research		Total Separately Budgeted Research		Other Educational Expenditures
1.		2.		3.		4.
$ N/A HEGIS Part B Line 1	=	$ N/A HEGIS Part B Line 2	+	$ N/A HEGIS Part B Lines 4+5	+	$ N/A HEGIS Part B Line 3, 6 – 10

Please check the appropriate box so we can readily classify your organization.

1. Primary administrative control or affiliation of your institution:

11	12	13	20
Federal ☐; Government	State ☐; government	Local ☐; government	Private ☐

2. Highest degree granted in the **sciences or engineering** by your institution during academic year 1972-73: (See fields of science on page 2 of the instructions)

1	1	2	3	4	8
Ph.D. ☐; or Sc.D.	M.D., ☐; D.D.S. etc.	Master's ☐;	Bachelor's ☐; or equivalent	None in ☐; sciences or engineering	2-year ☐ program

Please give an example of a science or engineering field for which the highest degree checked in item 2 above was awarded _____.

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SECTION A

CURRENT EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT (R&D) IN THE SCIENCES AND ENGINEERING

If your institution did not have any current expenditures for separately budgeted research and development in 1972-73 check "none" in the space provided here. ☐ None

Go to Section B for questions pertaining to instruction and departmental research and Section C for capital equipment and facility expenditures.

Item 1 **Current expenditures for separately budgeted research and development, by source of funds, 1972-73**

SOURCE OF FUNDS		THOUSANDS OF DOLLARS	
a. Federal Government	1110	$ 2,044,358	equals 2e and 4i (Col. 2)
b. State government	1120	270,850	include State funds to agricultural experiment stations
c. Local government	1130	14,386	
d. Foundations and voluntary health agencies	1140	131,757	
e. Industry	1150	86,385	
f. Institution's own funds	1160	317,396	
g. Other sources	1170	68,420	
h. Total *(sum of a to g)*[a]	1100	$ 2,933,552	equals 2e and 4i (Col 1)

Item 2 **Total and federally financed current expenditures for separately budgeted research and development, by major cost item, 1972-73**

COST ITEM		THOUSANDS OF DOLLARS	
		TOTAL (1)	FEDERAL GOVERNMENT (2)
a. Direct wages and salaries	1210	$ 1,473,414	$ 994,060
b. All other direct costs (including materials and supplies)	1220	902,754	647,950
c. Indirect costs reimbursed or reimbursable	1230	455,638	402,348
d. Other indirect costs defrayed with institution's own funds (see instructions)	1240	101,746	
e. Total *(sum of a to d)*[a]	1200	$ 2,933,552	$ 2,044,358

Item 3 **Total and federally financed current expenditures for separately budgeted research and development, by type of R&D activity, 1972-73**

TYPE OF R&D ACTIVITY	ESTIMATED PERCENT DISTRIBUTION (NO DECIMALS)	
	TOTAL	FEDERAL GOVERNMENT

			$ 2,044,358	◇ equals 2e and 4i (Col. 2)
	b. State government	1120	270,850	◇ include State funds to agricultural experiment stations
	c. Local government	1130	14,386	
	d. Foundations and voluntary health agencies	1140	131,757	
	e. Industry	1150	86,385	
	f. Institution's own funds	1160	317,396	
	g. Other sources	1170	68,420	
	h. Total *(sum of a to g)*[a]	1100	$ 2,933,552	◇ equals 2e and 4i (Col 1)

Item 2 **Total and federally financed current expenditures for separately budgeted research and development, by major cost item, 1972-73**

COST ITEM		THOUSANDS OF DOLLARS	
		TOTAL (1)	FEDERAL GOVERNMENT (2)
a. Direct wages and salaries	1210	$ 1,473,414	$ 994,060
b. All other direct costs (including materials and supplies)	1220	902,754	647,950
c. Indirect costs reimbursed or reimbursable	1230	455,638	402,348
d. Other indirect costs defrayed with institution's own funds (see instructions)	1240	101,746	
e. Total *(sum of a to d)*[a]	1200	$ 2,933,552	$ 2,044,358

Item 3 **Total and federally financed current expenditures for separately budgeted research and development, by type of R&D activity, 1972-73**

TYPE OF R&D ACTIVITY		ESTIMATED PERCENT DISTRIBUTION (NO DECIMALS)	
		TOTAL (1)	FEDERAL GOVERNMENT (2)
a. Basic research	1310	70 %	72 %
b. Applied research	1320	24 %	22 %
c. Development	1330	6 %	6 %
d. Total *(sum of a to c)*[a]	1300	100%	100%

[a]Totals in items 1h, 2e (Col. 1) and 4i (Col. 1) should be identical. Similarly, figures reported in items 1a, 2e (Col. 2) and 4i (Col. 2) should be identical. If figures for the foregoing items are not consistent, please give reasons in "Remarks" at the end of the questionnaire.

Item 4	Total and federally financed current expenditures for separately budgeted research and development, by field of science, 1972-73			
	FIELD OF SCIENCE		THOUSANDS OF DOLLARS	
			TOTAL (1)	FEDERAL GOVERNMENT (2)
	a. Engineering (total)	1410	$ 384,452	$ 288,310
	b. Physical sciences (total)	1420	$ 340,954	$ 280,904
	(1) Astronomy	1421	24,128	17,704
	(2) Chemistry	1422	115,091	88,098
	(3) Physics	1423	171,267	149,282
	(4) Other physical sciences, NEC	1424	30,468	25,820
	c. Environmental sciences (total)	1430	$ 200,376	$ 149,296
	d. Mathematical sciences (total)	1440	$ 74,683	$ 56,308
	(1) Mathematics (exclude computer sciences)	1441	35,827	28,786
	(2) Computer sciences	1442	38,856	27,522
	e. Life sciences (total)	1450	$ 1,517,994	$ 1,012,830
	(1) Biological (include agricultural sciences)	1451	797,206	483,252
	(2) Clinical medical	1452	642,661	487,712
	(3) Other life sciences, NEC	1453	78,127	41,866
	f. Psychology (total)	1460	$ 74,376	$ 58,589
	g. Social sciences (total)	1470	$ 235,607	$ 135,781
	(1) Economics	1471	46,645	22,257
	(2) Political science	1472	25,768	10,405
	(3) Sociology	1473	61,089	41,497
	(4) Other social sciences, NEC	1474	102,105	61,622
	h. Other sciences, NEC (total)	1480	$ 105,110	$ 62,340
	i. Total *(sum of a to h)*[a]	1400	$ 2,933,552	$ 2,044,358
	[a]Totals in 4i (col. 1) should be identical to 1h, and 4i (col. 2) should be identical to 1a.			

SECTION B
CURRENT EXPENDITURES FOR INSTRUCTION AND DEPARTMENTAL RESEARCH IN THE SCIENCES AND ENGINEERING

Item 5	Current expenditures for instruction and departmental research in the sciences and engineering, by field of science, 1972-73 (direct expenditures only)			
	FIELD OF SCIENCE		Total Instruction and Departmental Research (thousands of dollars) (1)	Departmental Research as a Percent of Col. 1 (No decimals) (2)
	a. Engineering	1510	$ 394,696	11 %
	b. Physical sciences	1520	381,798	13 %

(4) Other physical sciences, NEC	1424	30,468	25,820
c. Environmental sciences (total)	1430	$ 200,376	$ 149,296
d. Mathematical sciences (total)	1440	$ 74,683	$ 56,308
(1) Mathematics (exclude computer sciences)	1441	35,827	28,786
(2) Computer sciences	1442	38,856	27,522
e. Life sciences (total)	1450	$ 1,517,994	$ 1,012,830
(1) Biological (include agricultural sciences)	1451	797,206	483,252
(2) Clinical medical	1452	642,661	487,712
(3) Other life sciences, NEC	1453	78,127	41,866
f. Psychology (total)	1460	$ 74,376	$ 58,589
g. Social sciences (total)	1470	$ 235,607	$ 135,781
(1) Economics	1471	46,645	22,257
(2) Political science	1472	25,768	10,405
(3) Sociology	1473	61,089	41,497
(4) Other social sciences, NEC	1474	102,105	61,622
h. Other sciences, NEC (total)	1480	$ 105,110	$ 62,340
i. Total *(sum of a to h)*[a]	1400	$ 2,933,552	$ 2,044,358

[a]Totals in 4i (col. 1) should be identical to 1h, and 4i (col. 2) should be identical to 1a.

SECTION B
CURRENT EXPENDITURES FOR INSTRUCTION AND DEPARTMENTAL RESEARCH IN THE SCIENCES AND ENGINEERING

Item 5 — **Current expenditures for instruction and departmental research in the sciences and engineering, by field of science, 1972-73 (direct expenditures only)**

FIELD OF SCIENCE		Total Instruction and Departmental Research (thousands of dollars) (1)	Departmental Research as a Percent of Col. 1 (No decimals) (2)
a. Engineering	1510	$ 394,696	11 %
b. Physical sciences	1520	381,798	13 %
c. Environmental sciences	1530	99,885	14 %
d. Mathematical sciences	1540	253,814	11 %
e. Life sciences	1550	1,335,996	14 %
f. Psychology	1560	165,151	10 %
g. Social sciences	1570	712,578	11 %
h. Other sciences, NEC	1580	155,233	9 %
i. Total *(sum of a to h)*	1500	$ 3,499,151 a/	12

a/ Graduate Degree Granting Institutions in the Sciences and Engineering.

SECTION C
CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION

Item 6	Total and federally financed capital expenditures for scientific and engineering facilities and equipment for research, development, and instruction, by field of science, 1972-73

INSTRUCTIONS

Prorate any expenditures intended for use in two or more fields of science. Include current fund expenditures for equipment and facilities as well as plant and other funds, but exclude any materials and supplies reported under current expenditures in Section A or Section B.

FIELD OF SCIENCE		THOUSANDS OF DOLLARS		
		TOTAL (1)	FEDERAL GOVERNMENT (2)	OTHER SOURCES (3)
a. Engineering	1710	$ 60,108	$ 15,960	$ 44,148
b. Physical sciences	1720	109,760	24,629	85,131
c. Environmental sciences	1730	27,000	5,846	21,154
d. Mathematical sciences	1740	20,257	3,026	17,231
e. Life sciences	1750	490,760	162,177	328,583
f. Psychology	1760	39,735	5,127	34,608
g. Social sciences	1770	61,052	5,281	55,771
h. Other sciences, NEC	1780	37,613	5,213	32,400
i. Total *(sum of a to h)*	1700	$ 846,285	$ 227,259	$ 619,026

CHECK LIST

1. **Are expenditures in thousands ($25,324 as $25)? No Decimals.**
2. **Do the data add?**
3. **Are all items completed? YOUR ESTIMATE will be better than ours. Estimates may be noted in remarks.**
4. **Are all branches and components such as medical schools and agricultural experiment stations included?**
5. **Item 4 should include DEVELOPMENT**
6. **If your indirect cost computation for line 2d differs from the method shown in the Instructions, please explain in the Remarks section.**
7. **If you have any questions, please contact Ronald Biggar (202–282-7790).**

REMARKS

(If additional space is needed, attach an extra page). Please compare your 1972-73 expenditure data with your response for 1971-72 and explain any significant changes from prior years. Where possible, indicate any required adjustments in data for prior years.

Please indicate the number of any item that should *not* be published with your institution identified.

ITEM:

Prorate any expenditures intended for use in two or more fields of science. Include current fund expenditures for equipment and facilities as well as plant and other funds, but exclude any materials and supplies reported under current expenditures in Section A or Section B.

		TOTAL (1)	FEDERAL GOVERNMENT (2)	OTHER SOURCES (3)
a. Engineering	1710	$ 60,108	$ 15,960	$ 44,148
b. Physical sciences	1720	109,760	24,629	85,131
c. Environmental sciences	1730	27,000	5,846	21,154
d. Mathematical sciences	1740	20,257	3,026	17,231
e. Life sciences	1750	490,760	162,177	328,583
f. Psychology	1760	39,735	5,127	34,608
g. Social sciences	1770	61,052	5,281	55,771
h. Other sciences, NEC	1780	37,613	5,213	32,400
i. Total *(sum of a to h)*	1700	$ 846,285	$ 227,259	$ 619,026

CHECK LIST

1. **Are expenditures in thousands ($25,324 as $25)? No Decimals.**
2. **Do the data add?**
3. **Are all items completed? YOUR ESTIMATE will be better than ours. Estimates may be noted in remarks.**
4. **Are all branches and components such as medical schools and agricultural experiment stations included?**
5. **Item 4 should include DEVELOPMENT**
6. **If your indirect cost computation for line 2d differs from the method shown in the Instructions, please explain in the Remarks section.**
7. **If you have any questions, please contact Ronald Biggar (202–282-7790).**

REMARKS

(If additional space is needed, attach an extra page). Please compare your 1972-73 expenditure data with your response for 1971-72 and explain any significant changes from prior years. Where possible, indicate any required adjustments in data for prior years.

Please indicate the number of any item that should *not* be published with your institution identified.

ITEM:

Name of person submitting this form		Title and Telephone
Name of person who prepared this submission (if different from above)		Title and Telephone
NAME OF INSTITUTION	Date	ADDRESS (number, street, city, State, Zip Code)

APPENDIX C

List of Federally Funded Research and Development Centers Administered by Universities and University Consortia[1]

DEPARTMENT OF DEFENSE

Department of the Navy
- Applied Physics Laboratory (Johns Hopkins University)
- Applied Physics Laboratory (University of Washington)
- Center for Naval Analyses (University of Rochester)
- Applied Research Laboratory (Pennsylvania State University)

Department of the Air Force
- Lincoln Laboratory (Massachusetts Institute of Technology)

ATOMIC ENERGY COMMISSION

- Ames Laboratory (Iowa State University of Science and Technology)
- Argonne National Laboratory (University of Chicago and Argonne Universities Association)
- Brookhaven National Laboratory (Associated Universities, Inc.)
- Cambridge Electron Accelerator (Harvard University and Massachusetts Institute of Technology)
- Lawrence Radiation Laboratory, Berkeley and Livermore (University of California)
- Los Alamos Scientific Laboratory (University of California)
- Fermi National Accelerator Laboratory (Universities Research Association)
- Oak Ridge Associated Universities
- Plasma Physics Laboratory (Princeton University)
- Stanford Linear Accelerator Center (Stanford University)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

- Jet Propulsion Laboratory (California Institute of Technology)
- Space Radiation Effects Laboratory (College of William and Mary)

NATIONAL SCIENCE FOUNDATION

- Cerro-Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.)
- National Astronomy and Ionosphere Center (Cornell University)
- Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.)
- National Center for Atmospheric Research (University Corporation for Atmospheric Research)
- National Radio Astronomy Observatory (Associated Universities, Inc.)

[1]All of the organizations listed here were designated by the Federal Council for Science and Technology to be FFRDC's in academic year 1972-73.

Statistical

University-Admi
Funded Researc
Centers (Part II)

C-1 Current R&D
administered Fe
Development C
field of science.

C-2 Federally financ
in university-ad
Research and D
acter of work,
years 1964-73

C-3 Current R&D
administered F
1953-73

C-4 Selected financ
activities in uni
1973

Lawrence Radiation Laboratory, Berkeley and Livermore (University of California).
Los Alamos Scientific Laboratory (University of California).
Fermi National Accelerator Laboratory (Universities Research Association).
Oak Ridge Associated Universities.
Plasma Physics Laboratory (Princeton University).
Stanford Linear Accelerator Center (Stanford University).

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Jet Propulsion Laboratory (California Institute of Technology).
Space Radiation Effects Laboratory (College of William and Mary).

NATIONAL SCIENCE FOUNDATION

Cerro-Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.).
National Astronomy and Ionosphere Center (Cornell University).
Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.).
National Center for Atmospheric Research (University Corporation for Atmospheric Research).
National Radio Astronomy Observatory (Associated Universities, Inc.).

Statistical Tables

University-Administered Federally Funded Research and Development Centers (Part II)

C-1. Current R&D expenditures in university-administered Federally Funded Research and Development Centers, by character of work, field of science, for selected years: 1964-73 96

C-2. Federally financed current R&D expenditures in university-administered Federally Funded Research and Development Centers, by character of work, field of science, for selected years: 1964-73 97

C-3. Current R&D expenditures in university-administered FFRDC's, by character of work 1953-73 98

C-4. Selected financial characteristics of scientific activities in university-administered FFRDC's, 1973 98

Table C-1. CURRENT R&D EXPENDITURES IN UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DE
CENTERS, BY CHARACTER OF WORK, FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1964	1966	1968	1970
TOTAL	629,207	629,502	718,930	736,847
CHARACTER OF WORK:				
BASIC RESEARCH	191,027	226,547	275,595	268,732
APPLIED RESEARCH	201,800	207,012	231,207	215,587
DEVELOPMENT	236,380	195,943	212,128	252,528
FIELD OF SCIENCE:				
ENGINEERING (TOTAL)	154,704	150,522	178,945	189,060
PHYSICAL SCIENCES (TOTAL)	362,352	368,485	410,362	428,189
(1) ASTRONOMY	24,599	20,114	27,330	19,765
(2) CHEMISTRY	59,458	51,941	61,718	71,229
(3) PHYSICS	264,632	285,306	306,294	317,549
(4) OTHER PHYSICAL SCIENCES NEC	13,633	11,124	15,020	19,646
ENVIRONMENTAL SCIENCES (TOTAL)	28,310	31,173	27,875	26,970
MATHEMATICAL SCIENCES (TOTAL)	39,850	40,019	37,147	38,213
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	N/A	N/A	N/A	N/A
(2) COMPUTER SCIENCES	N/A	N/A	N/A	N/A
LIFE SCIENCES (TOTAL)	37,504	32,136	32,602	34,176
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	28,528	25,150	26,352	26,804
(2) CLINICAL MEDICAL	8,976	6,986	5,634	6,753
(3) OTHER LIFE SCIENCES, NEC	N/A	N/A	616	619
PSYCHOLOGY (TOTAL)	4,776	4,195	5,661	1,506
SOCIAL SCIENCES (TOTAL)	1,522	2,815	8,945	5,059
(1) ECONOMICS	N/A	N/A	149	20
(2) POLITICAL SCIENCE	N/A	N/A	336	220
(3) SOCIOLOGY	N/A	N/A	604	102
(4) OTHER SOCIAL SCIENCES, NEC	1,522	2,815	7,856	4,717
OTHER SCIENCES, NEC (TOTAL)	189	157	17,393	13,674

R&D EXPENDITURES IN UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS, BY CHARACTER OF WORK, FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

	1964	1966	1968	1970	1972	1973
.....	629,207	629,502	718,930	736,847	763,563	816,923
.....	191,027	226,547	275,595	268,732	250,167	296,955
.....	201,800	207,012	231,207	215,587	225,452	225,911
.....	236,380	195,943	212,128	252,528	287,944	294,057
.....	154,704	150,522	178,945	189,060	198,070	253,581
OTAL).....	362,352	368,485	410,362	428,189	431,864	427,428
.....	24,599	20,114	27,330	19,765	28,473	28,055
.....	59,458	51,941	61,718	71,229	75,395	74,229
.....	264,632	285,306	306,294	317,549	309,266	319,208
SCIENCES NEC..	13,633	11,124	15,020	19,646	18,730	5,936
ES (TOTAL)....	28,310	31,173	27,875	26,970	37,186	40,647
S (TOTAL).....	39,850	40,019	37,147	38,213	41,738	54,942
CLUDING NCES).....	N/A	N/A	N/A	N/A	N/A	16,508
ES.....	N/A	N/A	N/A	N/A	N/A	38,434
).....	37,504	32,136	32,602	34,176	36,346	33,940
LUDES SCIENCES).....	28,528	25,150	26,352	26,804	29,204	24,344
L.....	8,976	6,986	5,634	6,753	3,707	3,323
NCES,NEC.....	N/A	N/A	616	619	3,435	6,273
.....	4,776	4,195	5,661	1,506	1,447	898
AL).....	1,522	2,815	8,945	5,059	8,686	1,392
.....	N/A	N/A	149	20	N/A	835
CE.....	N/A	N/A	336	220	91	371
.....	N/A	N/A	604	102	55	186
IENCES, NEC...	1,522	2,815	7,856	4,717	8,540	0
(TOTAL).....	189	157	17,393	13,674	8,226	4,095

Table C-2. FEDERALLY FINANCED CURRENT R&D EXPENDITURES IN UNIVERSITY-ADMINISTERED FEDERALLY FUNDED REA C
AND DEVELOPMENT CENTERS, BY CHARACTER OF WORK, FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1 N

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1964	1966	1968	1970	19
TOTAL	629,166	629,409	715,346	734,131	758
CHARACTER OF WORK:					
BASIC RESEARCH	190,986	226,454	273,399	267,084	247
APPLIED RESEARCH	201,800	207,012	230,275	214,925	223
DEVELOPMENT	236,380	195,943	211,672	252,122	286
FIELD OF SCIENCE:					
ENGINEERING (TOTAL)	154,704	150,522	178,651	188,712	197
PHYSICAL SCIENCES (TOTAL)	362,330	368,408	409,308	427,879	430
(1) ASTRONOMY	24,385	19,929	26,485	19,759	27
(2) CHEMISTRY	59,458	51,941	61,689	71,206	75
(3) PHYSICS	264,610	285,229	306,114	317,268	308
(4) OTHER PHYSICAL SCIENCES NEC	13,877	11,309	15,020	19,646	18
ENVIRONMENTAL SCIENCES (TOTAL)	28,310	31,173	27,850	26,923	36
MATHEMATICAL SCIENCES (TOTAL)	39,840	40,003	36,669	37,554	41
(1) MATHEMATICS (EXCLUDING COMPUTER SCIENCES)	N/A	N/A	N/A	N/A	N
(2) COMPUTER SCIENCES	N/A	N/A	N/A	N/A	N
LIFE SCIENCES (TOTAL)	37,495	32,136	32,583	34,010	35
(1) BIOLOGICAL (INCLUDES AGRICULTURAL SCIENCES)	28,519	25,150	26,333	26,671	29
(2) CLINICAL MEDICAL	8,976	6,986	5,634	6,720	
(3) OTHER LIFE SCIENCES, NEC	N/A	N/A	616	619	
PSYCHOLOGY (TOTAL)	4,776	4,195	5,611	1,486	
SOCIAL SCIENCES (TOTAL)	1,522	2,815	7,335	4,258	
(1) ECONOMICS	N/A	N/A	138	20	
(2) POLITICAL SCIENCE	N/A	N/A	319	201	
(3) SOCIOLOGY	N/A	N/A	537	91	
(4) OTHER SOCIAL SCIENCES, NEC	1,522	2,815	6,341	3,946	
OTHER SCIENCES, NEC (TOTAL)	189	157	17,339	13,309	

ED CURRENT R&D EXPENDITURES IN UNIVERSITY-ADMINISTERED FEDERALLY FUNDED REASEARCH
T CENTERS, BY CHARACTER OF WORK, FIELD OF SCIENCE, FOR SELECTED YEARS, FY 1964-73

(DOLLARS IN THOUSANDS)

	1964	1966	1968	1970	1972	1973
.....	629,166	629,409	715,346	734,131	758,331	812,854
.....	190,986	226,454	273,399	267,084	247,977	294,965
.....	201,800	207,012	230,275	214,925	223,924	225,025
.....	236,380	195,943	211,672	252,122	286,430	292,864
.....	154,704	150,522	178,651	188,712	197,099	252,714
.....	362,330	368,408	409,308	427,879	430,328	425,358
.....	24,385	19,929	26,485	19,759	27,540	27,728
.....	59,458	51,941	61,689	71,206	75,305	73,958
.....	264,610	285,229	306,114	317,268	308,753	317,833
S NEC..	13,877	11,309	15,020	19,646	18,730	5,839
AL)....	28,310	31,173	27,850	26,923	36,811	40,017
L).....	39,840	40,003	36,669	37,554	41,599	54,721
.....	N/A	N/A	N/A	N/A	N/A	16,380
.....	N/A	N/A	N/A	N/A	N/A	38,341
.....	37,495	32,136	32,583	34,010	35,361	33,661
S).....	28,519	25,150	26,333	26,671	29,169	24,202
.....	8,976	6,986	5,634	6,720	3,257	3,195
EC.....	N/A	N/A	616	619	3,435	6,264
.....	4,776	4,195	5,611	1,486	1,426	896
.....	1,522	2,815	7,335	4,258	6,983	1,392
.....	N/A	N/A	138	20	N/A	835
.....	N/A	N/A	319	201	76	371
.....	N/A	N/A	537	91	46	186
NEC...	1,522	2,815	6,341	3,946	6,861	0
.....	189	157	17,339	13,309	8,224	4,095

Table C-3. Current R&D expenditures in university-administered Federally Funded Research and Development Centers, by character of work, FY 1953-73

(Dollars in millions)

Year	Total	Basic research		Applied research		Development	
		Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
1953[a]	$121	$ 33	27.3	$ 44	36.4	$ 44	36.4
1954	141	39	27.7	51	36.2	51	36.2
1955[a]	180	49	27.2	65	36.1	66	36.7
1956[a]	194	51	26.3	71	36.6	72	37.1
1957[a]	240	65	27.1	86	35.8	89	37.1
1958	293	78	26.6	102	34.8	113	38.6
1959[a]	338	92	27.2	119	35.2	127	37.6
1960[a]	360	97	26.9	122	33.9	141	39.2
1961[a]	410	115	28.0	135	32.9	160	39.0
1962[a]	470	136	28.9	155	33.0	179	38.1
1963[a]	530	159	30.0	170	32.1	201	37.9
1964	629	191	30.4	202	32.1	236	37.5
1965[a]	629	208	33.1	204	32.4	217	34.5
1966	630	227	36.0	207	32.9	196	31.1
1967[a]	673	250	37.1	219	32.5	204	30.3
1968	719	276	38.4	231	32.1	212	29.5
1969[a]	725	275	37.9	210	29.0	240	33.1
1970	737	269	36.5	216	29.3	252	34.2
1971[a]	716	260	36.3	210	29.3	246	34.4
1972	763	250	32.8	225	29.5	288	37.7
1973	817	297	36.3	226	27.7	294	36.0

[a] Estimates derived from related information; no survey took place this year.

Table C-4. Selected financial characteristics of scientific activities in university-administered Federally Funded Research and Development Centers, FY 1973

[Dollars in thousands]

Federal agency and geographic division	Number of FFRDC's	Research and development expenditures				
		Current expenditures				Capital[b] expenditures
		Total[a]	Basic research	Applied research	Development	
Total	23	$816,923	$296,955	$225,911	$294,057	$121,444
Sponsoring Federal agency:						
Atomic Energy Commission	11	504,559	220,694	173,419	110,446	90,313
Department of Defense	5	155,855	6,224	34,679	114,952	1,944
National Aeronautics and Space Administration	2	111,118	24,646	17,813	68,659	14,041
National Science Foundation	5	45,391	45,391	-	-	15,146

[a] Includes $2.7 million in non-Federal funds.
[b] Includes $1.1 million in non-Federal funds.

APPENDIX C
Reproduction of Survey Form

NSF FORM 411 OMB No. 99-R0279

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC ACTIVITIES OF INSTITUTIONS OF HIGHER EDUCATION

(Current and Capital Expenditures for Research, Development, and Instruction in the Sciences and Engineering, FY 1973)

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by October 31, 1973. Your cooperation in returning the survey questionnaires promptly is very important and will be appreciated.

Financial data are requested for the fiscal year which began on July 1, 1972, and ended on June 30, 1973, or your institution's equivalent fiscal year.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Please read the enclosed instructions before completing this form. Where exact data are not available, estimates are acceptable. Please complete all items; estimates by college officials will be better than NSF estimates. Enter "0" as an item total (lines 1100, 1200, 1300, etc., are item totals) rather than leave the total blank.

Name and address of institution:
(Please correct if name or address has changed)

(Aggregate data from 23 university-administered Federally Funded Reasearch and Development Centers)

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. **Exclude** data for Federally Funded R&D Centers administered by universities. A list of these Centers is shown on page 3 of the Instructions and Definitions. A separate questionnaire will be mailed directly to each Center.

Please transfer the following data elements from your response to HEGIS Part B–Current Fund Expenditures FY 1973

Total Educational and General Expenditures		Instruction and Departmental Research		Total Separately Budgeted Research		Other Educational Expenditures
1.		2.		3.		4.
$ HEGIS Part B Line 1	=	$ HEGIS Part B Line 2	+	$ HEGIS Part B Lines 4+5	+	$ HEGIS Part B Line 3, 6 – 10

Please check the appropriate box so we can readily classify your organization.

1. Primary administrative control or affiliation of your institution:

11	12	13	20
Federal ☐; Government	State ☐ ; government	Local ☐ ; government	Private ☐

201

99

202

form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W.
Washington, D.C. 20550
Attn: UNISG

This form should be returned by October 31, 1973. Your cooperation in returning the survey questionnaires promptly is very important and will be appreciated.

Financial data are requested for the fiscal year which began on July 1, 1972, and ended on June 30, 1973, or your institution's equivalent fiscal year.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Please read the enclosed instructions before completing this form. Where exact data are not available, estimates are acceptable. Please complete all items; estimates by college officials will be better than NSF estimates. Enter "0" as an item total (lines 1100, 1200, 1300, etc., are item totals) rather than leave the total blank.

Name and address of institution:
(Please correct if name or address has changed)

(Aggregate data from 23 university-administered Federally Funded Reasearch and Development Centers)

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. **Exclude** data for Federally Funded R&D Centers administered by universities. A list of these Centers is shown on page 3 of the Instructions and Definitions. A separate questionnaire will be mailed directly to each Center.

Please transfer the following data elements from your response to HEGIS Part B–Current Fund Expenditures FY 1973

Total Educational and General Expenditures		Instruction and Departmental Research		Total Separately Budgeted Research		Other Educational Expenditures
1.		2.		3.		4.
$ HEGIS Part B Line 1	=	$ HEGIS Part B Line 2	+	$ HEGIS Part B Lines 4+5	+	$ HEGIS Part B Line 3, 6 – 10

Please check the appropriate box so we can readily classify your organization.

1. Primary administrative control or affiliation of your institution:

11 Federal Government ☐; 12 State government ☐; 13 Local government ☐; 20 Private ☐

2. Highest degree granted in the **sciences or engineering** by your institution during academic year 1972-73: (See fields of science on page 2 of the instructions)

1 Ph.D. or Sc.D. ☐; 1 M.D., D.D.S. etc. ☐; 2 Master's ☐; 3 Bachelor's or equivalent ☐; 4 None in sciences or engineering ☐; 8 2-year program ☐

Please give an example of a science or engineering field for which the highest degree checked in item 2 above was awarded _____.

SECTION A

CURRENT EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT (R&D) IN THE SCIENCES AND ENGINEERING

If your institution did not have any current expenditures for separately budgeted research and development in 1972-73 check "none" in the space provided here. ☐ None

Go to Section B for questions pertaining to instruction and departmental research and Section C for capital equipment and facility expenditures.

Item 1 **Current expenditures for separately budgeted research and development, by source of funds, 1972-73**

SOURCE OF FUNDS		THOUSANDS OF DOLLARS	
a. Federal Government	1110	$ 812,854	equals 2e and 4i (Col. 2)
b. State government	1120	1,352	include State funds to agricultural experiment stations
c. Local government	1130	12	
d. Foundations and voluntary health agencies	1140	526	
e. Industry	1150	101	
f. Institution's own funds	1160	1,643	
g. Other sources	1170	435	
h. Total *(sum of a to g)*[a]	1100	$ 816,923	equals 2e and 4i (Col 1)

Item 2 **Total and federally financed current expenditures for separately budgeted research and development, by major cost item, 1972-73**

COST ITEM		THOUSANDS OF DOLLARS	
		TOTAL (1)	FEDERAL GOVERNMENT (2)
a. Direct wages and salaries	1210	$ 368,485	$ 366,538
b. All other direct costs (including materials and supplies)	1220	291,724	290,417
c. Indirect costs reimbursed or reimbursable	1230	156,704	155,899
d. Other indirect costs defrayed with institution's own funds (see instructions)	1240	10	
e. Total *(sum of a to d)*[a]	1200	$ 816,923	$ 812,854

Item 3 **Total and federally financed current expenditures for separately budgeted research and development, by type of R&D activity, 1972-73**

TYPE OF R&D ACTIVITY	ESTIMATED PERCENT DISTRIBUTION (NO DECIMALS)

203

100

20

a. Federal Government	1110	$ 812,854	◇ equals 2e and 4i (Col. 2)
b. State government	1120	1,352	◇ include State funds to agricultural experiment stations
c. Local government	1130	12	
d. Foundations and voluntary health agencies	1140	526	
e. Industry	1150	101	
f. Institution's own funds	1160	1,643	
g. Other sources	1170	435	
h. Total *(sum of a to g)*[a]	1100	$ 816,923	◇ equals 2e and 4i (Col 1)

Item 2 **Total and federally financed current expenditures for separately budgeted research and development, by major cost item, 1972-73**

COST ITEM		THOUSANDS OF DOLLARS	
		TOTAL (1)	FEDERAL GOVERNMENT (2)
a. Direct wages and salaries	1210	$ 368,485	$ 366,538
b. All other direct costs (including materials and supplies)	1220	291,724	290,417
c. Indirect costs reimbursed or reimbursable	1230	156,704	155,899
d. Other indirect costs defrayed with institution's own funds (see instructions)	1240	10	
e. Total *(sum of a to d)*[a]	1200	$ 816,923	$ 812,854

Item 3 **Total and federally financed current expenditures for separately budgeted research and development, by type of R&D activity, 1972-73**

TYPE OF R&D ACTIVITY		ESTIMATED PERCENT DISTRIBUTION (NO DECIMALS)	
		TOTAL (1)	FEDERAL GOVERNMENT (2)
a. Basic research	1310	36%	36%
b. Applied research	1320	28%	28%
c. Development	1330	36%	36%
d. Total *(sum of a to c)*[a]	1300	100%	100%

[a]Totals in items 1h, 2e (Col. 1) and 4i (Col. 1) should be identical. Similarly, figures reported in items 1a, 2e (Col. 2) and 4i (Col. 2) should be identical. If figures for the foregoing items are not consistent, please give reasons in "Remarks" at the end of the questionnaire.

Item 4	Total and federally financed current expenditures for separately budgeted research and development, by field of science, 1972-73			
	FIELD OF SCIENCE		THOUSANDS OF DOLLARS	
			TOTAL (1)	FEDERAL GOVERNMENT (2)
	a. Engineering (total)	1410	$ 253,581	$ 252,714
	b. Physical sciences (total)	1420	$ 427,428	$ 425,358
	(1) Astronomy	1421	28,055	27,728
	(2) Chemistry	1422	74,229	73,958
	(3) Physics	1423	319,208	317,833
	(4) Other physical sciences, NEC	1424	5,936	5,839
	c. Environmental sciences (total)	1430	$ 40,647	$ 40,017
	d. Mathematical sciences (total)	1440	$ 54,942	$ 54,721
	(1) Mathematics (exclude computer sciences)	1441	16,508	16,380
	(2) Computer sciences	1442	38,434	38,341
	e. Life sciences (total)	1450	$ 33,940	$ 33,661
	(1) Biological (include agricultural sciences)	1451	24,344	24,202
	(2) Clinical medical	1452	3,323	3,195
	(3) Other life sciences, NEC	1453	6,273	6,264
	f. Psychology (total)	1460	$ 898	$ 896
	g. Social sciences (total)	1470	$ 1,392	$ 1,392
	(1) Economics	1471	835	835
	(2) Political science	1472	371	371
	(3) Sociology	1473	186	186
	(4) Other social sciences, NEC	1474	0	0
	h. Other sciences, NEC (total)	1480	$ 4,095	$ 4,095
	i. Total *(sum of a to h)*[a]	1400	$ 816,923	$ 812,854
	[a]Totals in 4i (col. 1) should be identical to 1h, and 4i (col. 2) should be identical to 1a.			

SECTION B
CURRENT EXPENDITURES FOR INSTRUCTION AND DEPARTMENTAL RESEARCH IN THE SCIENCES AND ENGINEERING

Item 5	Current expenditures for instruction and departmental research in the sciences and engineering, by field of science, 1972-73 (direct expenditures only)			
	FIELD OF SCIENCE		Total Instruction and Departmental Research (thousands of dollars) (1)	Departmental Research as a Percent of Col. 1 (No decimals) (2)
	a. Engineering	1510	$	%
	b. Physical sciences	1520		%
	c. Environmental sciences	1530		%

	(4) Other physical sciences, NEC .	1424	5,936	5,839
	c. Environmental sciences (total) . .	1430	$ 40,647	$ 40,017
	d. Mathematical sciences (total) . . .	1440	$ 54,942	$ 54,721
	(1) Mathematics (exclude computer sciences)	1441	16,508	16,380
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	(3) Other life sciences, NEC . .	1453	6,273	6,264
	f. Psychology (total)	1460	$ 898	$ 896
	g. Social sciences (total)	1470	$ 1,392	$ 1,392
	(1) Economics	1471	835	835
	(2) Political science	1472	371	371
	(3) Sociology	1473	186	186
	(4) Other social sciences, NEC . .	1474	0	0
	h. Other sciences, NEC (total) . . .	1480	$ 4,095	$ 4,095
	i. Total *(sum of a to h)*[a]	1400	$ 816,923	$ 812,854
	[a]Totals in 4i (col. 1) should be identical to 1h, and 4i (col. 2) should be identical to 1a.			

SECTION B
CURRENT EXPENDITURES FOR INSTRUCTION AND DEPARTMENTAL RESEARCH IN THE SCIENCES AND ENGINEERING

Item 5 — **Current expenditures for instruction and departmental research in the sciences and engineering, by field of science, 1972-73 (direct expenditures only)**

FIELD OF SCIENCE		Total Instruction and Departmental Research (thousands of dollars) (1)	Departmental Research as a Percent of Col. 1 (No decimals) (2)
a. Engineering	1510	$	%
b. Physical sciences	1520		%
c. Environmental sciences	1530		%
d. Mathematical sciences	1540		%
e. Life sciences	1550		%
f. Psychology	1560		%
g. Social sciences	1570		%
h. Other sciences, NEC	1580		%
i. Total *(sum of a to h)*	1500	$	

SECTION C
CAPITAL EXPENDITURES FOR SCIENTIFIC AND ENGINEERING FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION

Item 6 — **Total and federally financed capital expenditures for scientific and engineering facilities and equipment for research, development, and instruction, by field of science, 1972-73**

INSTRUCTIONS

Prorate any expenditures intended for use in two or more fields of science. Include current fund expenditures for equipment and facilities as well as plant and other funds, but exclude any materials and supplies reported under current expenditures in Section A or Sectic . B.

FIELD OF SCIENCE		THOUSANDS OF DOLLARS		
		TOTAL (1)	FEDERAL GOVERN-MENT (2)	OTHER SOURCES (3)
a. Engineering	1710	$ 19,477	$ 19,477	$ 0
b. Physical sciences	1720	88,068	87,741	327
c. Environmental sciences . . .	1730	5,213	5,213	0
d. Mathematical sciences . . .	1740	5,314	5,314	0
e. Life sciences	1750	3,249	3,249	0
f. Psychology	1760	0	0	0
g. Social sciences	1770	0	0	0
h. Other sciences, NEC	1780	123	123	0
i. Total *(sum of a to h)* . . .	1700	$ 121,444	$ 121,117	$ 327

CHECK LIST

1. **Are expenditures in thousands ($25,324 as $25)? No Decimals.**
2. **Do the data add?**
3. **Are all items completed? YOUR ESTIMATE will be better than ours. Estimates may be noted in remarks.**
4. **Are all branches and components such as medical schools and agricultural experiment stations included?**
5. **Item 4 should include DEVELOPMENT**
6. **If your indirect cost computation for line 2d differs from the method shown in the Instructions, please explain in the Remarks section.**
7. **If you have any questions, please contact Ronald Biggar (202–282-7790).**

REMARKS

(If additional space is needed, attach an extra page). Please compare your 1972-73 expenditure data with your response for 1971-72 and explain any significant changes from prior years. Where possible, indicate any required adjustments in data for prior years.

Please indicate the number of any item that should *not* be published with your institution identified.

ITEM:

Prorate any expenditures intended for use in two or more fields of science. Include current fund expenditures for equipment and facilities as well as plant and other funds, but exclude any materials and supplies reported under current expenditures in Section A or Section B.

		TOTAL (1)	GOVERNMENT (2)	OTHER SOURCES (3)
a. Engineering	1710	$ 19,477	$ 19,477	$ 0
b. Physical sciences	1720	88,068	87,741	327
c. Environmental sciences	1730	5,213	5,213	0
d. Mathematical sciences	1740	5,314	5,314	0
e. Life sciences	1750	3,249	3,249	0
f. Psychology	1760	0	0	0
g. Social sciences	1770	0	0	0
h. Other sciences, NEC	1780	123	123	0
i. Total *(sum of a to h)*	1700	$ 121,444	$ 121,117	$ 327

CHECK LIST

1. **Are expenditures in thousands ($25,324 as $25)? No Decimals.**
2. **Do the data add?**
3. **Are all items completed? YOUR ESTIMATE will be better than ours. Estimates may be noted in remarks.**
4. **Are all branches and components such as medical schools and agricultural experiment stations included?**
5. **Item 4 should include DEVELOPMENT**
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7. **If you have any questions, please contact Ronald Biggar (202–282-7790).**

REMARKS

(If additional space is needed, attach an extra page). Please compare your 1972-73 expenditure data with your response for 1971-72 and explain any significant changes from prior years. Where possible, indicate any required adjustments in data for prior years.

Please indicate the number of any item that should *not* be published with your institution identified.

ITEM:

Name of person submitting this form		Title and Telephone
Name of person who prepared this submission (if different from above)		Title and Telephone
NAME OF INSTITUTION	Date	ADDRESS (number, street, city, State, Zip Code)

APPENDIX D

Reproduction of Covering Letter and Instructions[1]

NATIONAL SCIENCE FOUN
WASHINGTON, D.C. 20550

Dear Sir:

The National Science Foundation requests your
survey of scientific activities of institutio
Timely statistics from the survey are very i
National Science Board in appraising the nati
efforts. Beginning this year, the survey wil
basis. Dr. H. Guyford Stever, NSF Director,
this on May 7, 1973, and a copy of the messag
information.

The few changes between the enclosed survey f
shown in the notice of modifications containe
instructions. Please note that a postcard is
that should be returned immediately upon rece
that the questionnaire has reached you and wi
persons to be contacted if questions arise in
phases of the survey.

Please complete and return the form to us by
institutional responses are critical to the s
will be processing the data as soon as they a
inclusion in the National Science Board's ann
which highlights the latest "status of scienc
survey data were used extensively in that rep

Please note that Item 5 requests estimates of
mental research, even though we realize that
difficulty in reporting it. One of the recom
business officers and institutional research
recent NSF seminar on departmental research
reporting be provided as part of our survey.
letter suggests three methods to estimate dep

[1]The questionnaires used in the survey are reproduced in appendixes B and C.

APPENDIX D

roduction of Covering etter and Instructions[1]

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

August 17, 1973

Dear Sir:

The National Science Foundation requests your cooperation in its eighth survey of scientific activities of institutions of higher education. Timely statistics from the survey are very important to NSF and the National Science Board in appraising the national and academic R&D efforts. Beginning this year, the survey will be conducted on an annual basis. Dr. H. Guyford Stever, NSF Director, notified your president of this on May 7, 1973, and a copy of the message is enclosed for your information.

The few changes between the enclosed survey form and last year's are shown in the notice of modifications contained on the last page of the instructions. Please note that a postcard is included in the package that should be returned immediately upon receipt. It will assure us that the questionnaire has reached you and will provide the names of persons to be contacted if questions arise in the follow-up and editing phases of the survey.

Please complete and return the form to us by October 31, 1973. Early institutional responses are critical to the success of the survey. We will be processing the data as soon as they are returned to us for inclusion in the National Science Board's annual report to the President which highlights the latest "status of science" indicators. Last year's survey data were used extensively in that report.

Please note that Item 5 requests estimates of expenditures for departmental research, even though we realize that many institutions have difficulty in reporting it. One of the recommendations of university business officers and institutional researchers who participated in a recent NSF seminar on departmental research was that guidelines in reporting be provided as part of our survey. The sheet attached to this letter suggests three methods to estimate departmental research funds.

[1] nnaires used in the survey are reproduced in appendixes B

ATTACHMENT

Guidelines to Report Expenditures for Departmental Research

Expenditures for departmental research are estimated at nearly $680 million in 1972, or about one-fifth of total academic research. Departmental research, which is a concomitant to the teaching mission, is rarely identified in university record-keeping. Nearly one-half of the Nation's institutions of higher education are unable to estimate its volume in expenditures, including some of the most prominent university centers of advanced research.

A seminar on departmental research was held recently by the National Science Foundation. The participants consisted of about 20 persons drawn from major universities, government, and higher education professional associations.

Their discussion revealed three methods that institutions might use to estimate expenditures for departmental research, as follows:

1. Request that department chairmen give estimates of the percentage of time that their own faculty spend on departmental research. The survey coordinator then can combine the estimates and report those percentages in Item 5, column 2;

2. Either ask the department chairmen to estimate, or estimate departmental research from central records as a residual. First estimate the proportion of time spent by faculty on instruction, organized research, public service, and administration--the residual to departmental research;

3. For institutions that have faculty activity reporting systems, use the reports as a basis of estimating the proportion of time spent on departmental research.

Please note that revenues produced from charges for medical services and for user charges at agricultural experiment stations should be included as departmental research to the extent that they support research, even though these revenues may not be thought to be institutional resources and may not be included in your accounting records.

The detailed findings and recommendations from the NSF seminar on departmental research will be published and distributed at a later date.

NSF recognizes that some of the data
including breakdowns of expenditures
development, and departmental researc
percentage estimates rather than abs
only national aggregates for these s
individual institutions will not be

We are enclosing a copy of a summary
that it will demonstrate that NSF is
statistics. A detailed report will
you would like to have any additiona
please let us know and we will try t

Your continued cooperation in report
greatly appreciated. If you have qu
or Mr. Ronald Biggar. We may be rea

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ATTACHMENT

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e thought to be institutional resources
accounting records.

mendations from the NSF seminar on depart-
ed and distributed at a later date.

NSF recognizes that some of the data are "soft" estimates. These data, including breakdowns of expenditures into basic and applied research, development, and departmental research are requested in the form of percentage estimates rather than absolute amounts. NSF will publish only national aggregates for these statistics so that reports by individual institutions will not be identified.

We are enclosing a copy of a summary of last year's data with the hope that it will demonstrate that NSF is trying to provide early release of statistics. A detailed report will be published in a few months. If you would like to have any additional data from the survey listings, please let us know and we will try to provide them to you.

Your continued cooperation in reporting timely data to NSF will be greatly appreciated. If you have questions, please address them to me or Mr. Ronald Biggar. We may be reached on Area Code 202, 282-7790.

Sincerely yours,

Richard M. Berry

Richard M. Berry, Study Director
Universities and Nonprofit
Institutions Studies Group
Division of Science Resources Studies

Enclosures

NSF Form 411
Instruction Sheet

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

SURVEY OF SCIENTIFIC ACTIVITIES OF INSTITUTIONS OF HIGHER EDUCATION

(Current and Capital Expenditures for Research, Development, and Instruction in the Sciences and Engineering, FY 1973)

INSTRUCTIONS AND DEFINITIONS

The National Science Foundation requests your cooperation in completing the attached questionnaire covering the financial characteristics of your institution as they relate to the sciences and engineering.

Your cooperation in returning the questionnaire by October 31, 1973, will be greatly appreciated.

Information on some items may not be available from records normally maintained by your institution. *Reasonable estimates for such items will be satisfactory.* Where it is not possible to identify expenditures for the year, revenues may be substituted. Enter "0" as an item total (lines 1100, 1200, 1300, etc., are item totals) rather than leave the total blank.

This survey is generally comparable to that conducted by this office in 1972, covering financial expenditures for academic year 1971–72. Where data reported in the current survey differ significantly from those reported in the previous survey, please indicate the reasons for the difference, such as the inclusion of unreimbursed indirect costs in the space provided for "Remarks" at the end of the questionnaire. Copies of your institution's earlier responses are available upon request.

If you have any questions regarding information requested on this form or if you need additional forms, write or telephone Mr. Ronald Biggar at the Universities and Nonprofit Institutions Studies Group (202—282-7790), National Science Foundation, 1800 "G" Street, N. W., Washington, D. C. 20550.

The financial survey covers the fiscal year beginning on July 1, 1972, and ending June 30, 1973, or your institution's equivalent fiscal year ending in 1973.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. *Exclude* data for Federally Funded R&D Centers administered by universities. A separate questionnaire will be mailed directly to each Center. See page 3 for a list of Federally Funded Research and Development Centers (FFRDC's). FFRDC's, as designated by Federal agencies, are R&D organizations exclusively or substantially financed by the Government and administered on a contractual basis by educational institutions or other organizations.

In completing this form, respondents may find it useful to refer to principles of financial accounting for institutions of higher education presented in *College and University Business Administration* (Washington, D. C.: American Council on Education, 1968).

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Section A—Current Expenditures for Separately Budgeted R

(Expenditures for instruction and departmental research and facilities are to be excluded here but reported in Sections

Definitions

Research and development includes basic and applied research in the sciences and in engineering, and design and development of prototypes and processes.

Research is a systematic, intensive study directed toward fuller knowledge of the subject studied. Research may be either basic or applied.

Basic research is directed toward an increase of knowledge; it is research where the primary aim *of the investigator* is a fuller knowledge or understanding of the subject under study rather than a prac

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Classification of Fields of Scie

Listed below are illustrative disciplines included in engineeri
which separate data are requested in items 4, 5, and 6 of the qu

ENGINEERING
- AERONAUTICAL:
  - Aerodynamics
- ASTRONAUTICAL:
  - Aerospace, space technology
- CHEMICAL:
  - Petroleum, petroleum refining, process
- CIVIL:
  - Architectural, hydraulic, hydrologic, marine, sanitary and environmental, structural, transportation
- ELECTRICAL:
  - Communication, electronic, power
- MECHANICAL:
  - Engineering mechanics
- METALLURGY AND MATERIALS:
  - Ceramic, mining, textile, welding
- OTHER ENGINEERING, NEC*
  - Agricultural, industrial and management, nuclear, ocean engineering systems

PHYSICAL SCIENCES
- ASTRONOMY:
  - Laboratory astrophysics, optical astronomy, radio astronomy, theoretical astrophysics, X-ray, gamma-ray, neutrino astronomy
- CHEMISTRY:
  - Inorganic, organo-metallic, organic, physical
- PHYSICS:
  - Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma
- OTHER PHYSICAL SCIENCES, NEC*

ENVIRONMENTAL SCIENCES (Terrestrial and Extra-terrestrial)
- ATMOSPHERIC SCIENCES:
  - Aeronomy, solar, weather modification, extra-terrestrial atmospheres, meteorology
- GEOLOGICAL SCIENCES:
  - Engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology, soil sciences

- OCEANOG
  - Chemic
  - oceanog
- MATHEMAT
  - Algebra,
  - foundation
  - topology
- COMPUTER
  - Design, de
  - to data sto
  - sciences (
  - processing.
- LIFE SCIENC
  - BIOLOGIC
    - Agricu
    - bacteri
    - oceano
    - entomo
    - microbi
    - pathol
    - physiol
  - CLINICAL
    - Internal
    - medicin
    - veterina
    - habilita
  - OTHER L
- PSYCHOLOG
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NCE FOUNDATION
N, D. C. 20550

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AND DEFINITIONS

The financial survey covers the fiscal year beginning on July 1, 1972, and ending June 30, 1973, or your institution's equivalent fiscal year ending in 1973.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. *Exclude* data for Federally Funded R&D Centers administered by universities. A separate questionnaire will be mailed directly to each Center. See page 3 for a list of Federally Funded Research and Development Centers (FFRDC's). FFRDC's, as designated by Federal agencies, are R&D organizations exclusively or substantially financed by the Government and administered on a contractual basis by educational institutions or other organizations.

In completing this form, respondents may find it useful to refer to principles of financial accounting for institutions of higher education presented in *College and University Business Administration* (Washington, D. C.: American Council on Education, 1968).

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

1

Section A—Current Expenditures for Separately Budgeted Research and Development (R&D)

(Expenditures for instruction and departmental research and capital equipment and facilities are to be excluded here but reported in Sections B and C respectively)

Definitions

Research and development includes basic and applied research in the sciences and in engineering, and design and development of prototypes and processes.

Research is a systematic, intensive study directed toward fuller knowledge of the subject studied. Research may be either basic or applied.

Basic research is directed toward an increase of knowledge; it is research where the primary aim *of the investigator* is a fuller knowledge or understanding of the subject under study rather than a practical application thereof.

Applied research is directed toward the practical application of knowledge. The definition of applied research differs from the definition of basic research chiefly in terms of the objectives *of the investigator*.

Development is the systematic use of knowledge directed toward the design and production of useful prototypes, materials, devices, systems, methods, or processes. It does not include quality control or routine product testing.

Classification of Fields of Science

Listed below are illustrative disciplines included in engineering and the various fields of science for which separate data are requested in items 4, 5, and 6 of the questionnaire.

ENGINEERING
- AERONAUTICAL:
  - Aerodynamics
- ASTRONAUTICAL:
  - Aerospace, space technology
- CHEMICAL:
  - Petroleum, petroleum refining, process
- CIVIL:
  - Architectural, hydraulic, hydrologic, marine, sanitary and environmental, structural, transportation
- ELECTRICAL:
  - Communication, electronic, power
- MECHANICAL:
  - Engineering mechanics
- METALLURGY AND MATERIALS:
  - Ceramic, mining, textile, welding
- OTHER ENGINEERING, NEC*
  - Agricultural, industrial and management, nuclear, ocean engineering systems

PHYSICAL SCIENCES
- ASTRONOMY:
  - Laboratory astrophysics, optical astronomy, radio astronomy, theoretical astrophysics, X-ray, gamma-ray, neutrino astronomy
- CHEMISTRY:
  - Inorganic, organo-metallic, organic, physical
- PHYSICS:
  - Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma
- OTHER PHYSICAL SCIENCES, NEC*

ENVIRONMENTAL SCIENCES (Terrestrial and Extra-terrestrial)
- ATMOSPHERIC SCIENCES:
  - Aeronomy, solar, weather modification, extra-terrestrial atmospheres, meteorology
- GEOLOGICAL SCIENCES:
  - Engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology, soil sciences
- OCEANOGRAPHY:
  - Chemical oceanography, geological oceanography, physical oceanography, marine geophysics

MATHEMATICAL SCIENCES
- Algebra, analysis, applied mathematics, computer science, foundations and logic, geometry, numerical analysis, statistics, topology

COMPUTER SCIENCE:
- Design, development, and application of computer capabilities to data storage and manipulation, computer and information sciences (general), information sciences and systems, data processing, computer programming, systems analysis

LIFE SCIENCES
- BIOLOGICAL:
  - Agricultural sciences, anatomy, animal sciences, bacteriology, biochemistry, biogeography, biological oceanography, biophysics, ecology, embryology, entomology, evolutionary biology, genetics, immunology, microbiology, nutrition and metabolism, parasitology, pathology, pharmacology, physical anthropology, physiology, plant sciences, radiobiology, systematics
- CLINICAL MEDICAL:
  - Internal medicine, neurology, ophthalmology, preventive medicine and public health, psychiatry, radiology, surgery, veterinary medicine, dentistry, physical medicine and rehabilitation, pharmacy, podiatry
- OTHER LIFE SCIENCES, NEC*

PSYCHOLOGY
- BIOLOGICAL ASPECTS:
  - Experimental psychology, animal behavior, clinical psychology, comparative psychology, ethology
- SOCIAL ASPECTS:
  - Social psychology, educational, personnel, vocational psychology and testing; industrial and engineering psychology; development and personality
- OTHER PSYCHOLOGICAL SCIENCES, NEC*

* NOT ELSEWHERE CLASSIFIED—Used for multidisciplinary projects within the primary field and for single discipline projects not requested separately. Note disciplines in "Remarks" section.

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SOCIAL SCIENCES

ECONOMICS

Econometrics and economic statistics, history of economic thought, international economics, industrial, labor and agricultural economics, macroeconomics, microeconomics, public finance and fiscal policy, theory, economic systems and development

POLITICAL SCIENCE

Area or regional studies, comparative government, history of political ideas, international relations and law, national, political and legal systems, political theory, public administration

SOCIOLOGY

Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and social welfare, sociological theory

OTHER SOCIAL SCIENCES, NEC*

Cultural anthropology, history, linguistics, socio-economic geography, and research in education

OTHER SCIENCES, NEC*

To be used only when multidisciplinary and interdisciplinary aspects make it impossible to classify the project or employment under one primary field. Do not include non-science activities such as English or music because these activities are outside the scope of the survey.

Federally Funded Research and Development Centers Administered by Universities and Colleges

Ames Laboratory
Applied Physics Laboratory (Johns Hopkins University)
Applied Physics Laboratory (University of Washington)
Argonne National Laboratory
Brookhaven National Laboratory
Cambridge Electron Accelerator
Center for Naval Analysis
Cerro Tololo Inter-American Observatory
E. O. Lawrence Berkeley Laboratory
E. O. Lawrence Livermore Laboratory
Jet Propulsion Laboratory
Kitt Peak National Observatory
Lincoln Laboratory
Los Alamos Scientific Laboratory
National Accelerator Laboratory
National Astronomy and Ionosphere Center
National Center for Atmospheric Research
National Radio Astronomy Observatory
Oak Ridge Associated Universities
Ordnance Research Laboratory
Plasma Physics Laboratory
Space Radiation Effects Laboratory
Stanford Linear Accelerator Center

Survey Items

Item 1. Current expenditures for separately budgeted research and development, by source of funds, 1972-73. Include indirect costs (see item 2.)

Source of funds refers to immediate sources rather than ultimate sources of funds concerned. For example, funds received by your institution from a foundation should be reported under that source, even if industry was the original source of some or all of the foundation's funds.

Under *Federal Government* (item 1a) include grants and contracts earmarked for research and development by all agencies of the Federal Government. *Exclude R&D contracts subcontracted by your institution to be performed by other organizations.*

Under *State government* (item 1b) include funds designated for R&D by the State government and its agencies. Include here State funds supporting research and development at agricultural experiment stations.

Under *local government* (item 1c) include funds designated for R&D by county, municipal, or other local governments and their agencies.

Under *Foundations and voluntary health agencies* (item 1d) include grants specified for research and development. Funds from foundations which are affiliated with or grant solely to your institution should be included under *Institution's own funds* (item 1f). Funds specifically designated for R&D and derived from a health agency that is a unit of a State or local government should be reported under *State* or *local government*. Funds from professional societies such as the American Medical Association and the American Dental Association should be reported under *Other sources* (item 1g).

Under *Industry* (including trade associations) (item 1e) include all grants and contracts allocated to R&D by profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry, which should be reported under *Foundations.*

Under *Institution's own funds* (item 1f) include any funds which the institution was free to designate for R&D and which were in fact so budgeted. The sources of these funds may include endowment income; tuition and fees; general-purpose State or local government appropriations; and general-purpose grants from industry, foundations, health agencies or other outside sources, provided these were unrestricted funds and were utilized by your institution for separately budgeted R&D. Do not include any salaries or other expenditures which are budgeted as instruction or departmental research even though these salaries or other expenditures contribute to the performance of separately budgeted R&D. Indirect costs on separately budgeted projects funded by the institution should be included as well as direct costs.

Under *Other sources* (item 1g) report any additional funds received from outside sources other than those already noted, and which were earmarked for R&D *by the source*. Examples include gifts, grants, or contracts received from private individuals or professional societies, and designated for R&D by them.

Item 2. Total and federally financed current expenditures for separately budgeted research and development, by major cost item, 1972-73.

The purpose of this question is to obtain a cost breakdown of the current expenditures associated with the performance of research and development at your institution. For each of the cost items indicate the amount funded by the Federal Government (column 2). The total shown in 2e (column 1) should be the same as the totals in item 1h and item 3d (column 1). Similarly, the total shown for Federal Government in item 2e (column 2) should be the same as totals in item 1a and in item 3d (column 2).

In item 2a, report direct salaries and wages charged to separately budgeted R&D accounts of your institution. Include costs of fringe benefits only where they can be directly attributed to the costs of separately budgeted research and development; otherwise, include such costs under item 2c, indirect costs reimbursed or reimbursable.

In item 2b, report all expenditures for materials and expendable equipment.

In item 2c, report all indirect (overhead) costs attributable to separately budgeted R&D expenditures which were reimbursed or will be reimbursed by the sponsoring organization.

In item 2d, report all indirect costs associated with separately budgeted R&D expenditures which were incurred by your institution and which are not reported in item 2c. For example, item 2d should reflect 1) an estimate of the overhead costs associated with R&D financed by your own institution; 2) indirect costs associated with federally financed R&D projects but borne by your institution in accordance with cost-shar-

SOCIOLOGY
Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and social welfare, sociological theory

OTHER SOCIAL SCIENCES, NEC*
Cultural anthropology, history, linguistics, socio-economic geography, and research in education

OTHER SCIENCES, NEC*
To be used only when multidisciplinary and interdisciplinary aspects make it impossible to classify the project or employment under one primary field. Do not include non-science activities such as English or music because these activities are outside the scope of the survey.

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funds supporting research and development at agricultural experiment stations.

Under *local government* (item 1c) include funds designated for R&D by county, municipal, or other local governments and their agencies.

Under *Foundations and voluntary health agencies* (item 1d) include grants specified for research and development. Funds from foundations which are affiliated with or grant solely to your institution should be included under *Institution's own funds* (item 1f). Funds specifically designated for R&D and derived from a health agency that is a unit of a State or local government should be reported under *State* or *local government*. Funds from professional societies such as the American Medical Association and the American Dental Association should be reported under *Other sources* (item 1g).

Under *Industry* (including trade associations) (item 1e) include all grants and contracts allocated to R&D by profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry, which should be reported under *Foundations*.

Under *Institution's own funds* (item 1f) include any funds which the institution was free to designate for R&D and which were in fact so budgeted. The sources of these funds may include endowment income; tuition and fees; general-purpose State or local government appropriations; and general-purpose grants from industry, foundations, health agencies or other outside sources, provided these were unrestricted funds and were utilized by your institution for separately budgeted R&D. Do not include any salaries or other expenditures which are budgeted as instruction or departmental research even though these salaries or other expenditures contribute to the performance of separately budgeted

R&D. Indirect costs on separately budgeted projects funded by the institution should be included as well as direct costs.

Under *Other sources* (item 1g) report any additional funds received from outside sources other than those already noted, and which were earmarked for R&D *by the source*. Examples include gifts, grants, or contracts received from private individuals or professional societies, and designated for R&D by them.

Item 2. Total and federally financed current expenditures for separately budgeted research and development, by major cost item, 1972-73.

The purpose of this question is to obtain a cost breakdown of the current expenditures associated with the performance of research and development at your institution. For each of the cost items indicate the amount funded by the Federal Government (column 2). The total shown in 2e (column 1) should be the same as the totals in item 1h and item 3d (column 1). Similarly, the total shown for Federal Government in item 2e (column 2) should be the same as totals in item 1a and in item 3d (column 2).

In item 2a, report direct salaries and wages charged to separately budgeted R&D accounts of your institution. Include costs of fringe benefits only where they can be directly attributed to the costs of separately budgeted research and development; otherwise, include such costs under item 2c, indirect costs reimbursed or reimbursable.

In item 2b, report all expenditures for materials and expendable equipment.

In item 2c, report all indirect (overhead) costs attributable to separately budgeted R&D expenditures which were reimbursed or will be reimbursed by the sponsoring organization.

In item 2d, report all indirect costs associated with separately budgeted R&D expenditures which were incurred by your institution and which are not reported in item 2c. For example, item 2d should reflect 1) an estimate of the overhead costs associated with R&D financed by your own institution; 2) indirect costs associated with federally financed R&D projects but borne by your institution in accordance with cost-sharing agreements; or 3) the difference between indirect cost rates allowed by the sources of R&D funds and the indirect costs incurred by your institution. For example, an institution with a Federal audited indirect cost rate of 60 percent of wages and salaries which has spent $1 million for wages and salaries would have $600,000 in indirect costs. If the amount in item 2c is only $400,000, the unrecovered and unrecoverable remainder, $200,000, should be reported in item 2d. If your computation differs from the above method, please explain in the Remarks Section.

Item 3. Total and federally financed current expenditures for separately budgeted research and development, by type of R&D activity, 1972-73.

Types of R&D activity for which separate data are requested (basic research, applied research, and development) are defined on pages 1 and 2 of the Instructions. It is recognized that your records may not yield exact figures on amounts expended for each of the three categories. Therefore, percentage estimates of the breakdown will be satisfactory. The "100 percent" in item 3d refers to the total and federally funded R&D expenditures reported in 1h and 1a.

Item 4. Total and federally financed current expenditures for separately budgeted research and development, by field of science, 1972-73. **Include indirect costs.**

In column 1, include all current expenditures for total separately budgeted R&D, by field of science as shown on page 2, whether such expenditures derive from outside sources or your institution's own funds, and whether from contracts, grants, gifts, endowments (income or prinicipal), State and local government appropriations, or other sources, provided the funds were separately budgeted for R&D and were expended in the fiscal year 1972-73. Also include any indirect costs reimbursed or reimbursable by outside sponsors of R&D projects.

In column 2, classify total separately budgeted R&D financed by the Federal Government, by field of science.

Totals in item 4i (columns 1 and 2) should equal 1h and 1a, respectively.

Section B—Current Expenditures for Instruction and Departmental Research in the Sciences and Engineering

(Expenditures for capital equipment and facilities are to be excluded here but reported in Section C)

Current expenditures for instruction and departmental research include the salaries of department heads, faculty members, secretaries and technicians, office and laboratory supplies, and other expenses. All expenditures incurred for instructional programs in science and engineering subjects for students pursuing credit courses of study which lead generally to a certificate or degree should be included.

Item 5. Current expenditures for instruction and departmental research in the sciences and engineering, by field of science, 1972-73.

Report all current *direct* expenditures of the instructional departments, colleges, and schools of the institution in the sciences and engineering, by field of science.

In column 2, percentage estimates for departmental research will be sufficient. It is recognized that the accounting systems of institutions of higher education may not yield an exact breakdown between expenditures for instruction and expenditures for departmental research. However, estimates of the proportion of faculty time devoted to departmental research may serve as a useful guideline in estimating the share of departmental expenditures allocable to departmental research.

Departmental research means research activities that are not separately budgeted and accounted for. It does not include externally funded or other separately budgeted research. Include institutional funds used to defray the direct cost of separately budgeted research; exclude such funds from the amounts reported in Section A.

Note: The time spent by faculty or other staff members in supervising the thesis work of graduate students should be reported as an expenditure for instruction, not for departmental research. *If no departmental research is performed by your organization, please report zero in column 2.*

Section C—Capital Expenditures for Scientific and Engineering Facilities and Equipment for Research, Development, and Instruction

This section covers capital expenditures for scientific and engineering facilities and equipment for research, development, and instruction during 1972-73. Report funds expended during 1972-73 for facilities which were in process in that year and for facilities which were completed that year. Expenditures for administration buildings, steam plants, residence halls, and other such facilities should be excluded unless utilized principally for research, development, or instruction in engineering or in the sciences. Land costs should be excluded.

Facilities and equipment expenditures include the following: (a) fixed equipment such as built-in equipment and furnishings (hoods, fixed laboratory tables and benches, and ventilation equipment); (b) movable scientific equipment such as oscilloscopes, pulse-height analyzers, spectrometers, and plasma and protein separators; (c) movable furnishings such as bookcases, desks, file cabinets, tables, and simple tools; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; and (e) facilities constructed to house separate components such as medical schools, teaching hospitals and university-controlled research centers; and (f) special separate facilities used to house scientific apparatus such as hypersonic tunnels, accelerators, oceanographic vessels, and computers.

Current-fund expenditures for capital equipment and facilities should be reported in this section and should be excluded from Sections A and B. Expenditures from plant and other funds for facilities and equipment should likewise be included in this section.

Modifications since the 1972 Su

1) Separate data for medical schools *are not* required. Please include medical school expenditures as part of your institution total.

2) State funds that support research and development at agricultural experiment stations should be considered as State support rather than institution's own funds.

3) The foundation and voluntary health agency lines are now combined.

4) See page 4 for a more complete definition of unreimbursed indirect costs and an example of how such a figure might be developed.

5) A list of Federally Funded Research and Development Centers is provided on page 3.

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instruction and expenditures for departmental research. However, estimates of the proportion of faculty time devoted to departmental research may serve as a useful guideline in estimating the share of departmental expenditures allocable to departmental research.

Departmental research means research activities that are not separately budgeted and accounted for. It does not include externally funded or other separately budgeted research. Include institutional funds used to defray the direct cost of separately budgeted research; exclude such funds from the amounts reported in Section A.

Note: The time spent by faculty or other staff members in supervising the thesis work of graduate students should be reported as an expenditure for instruction, not for departmental research. *If no departmental research is performed by your organization, please report zero in column 2.*

c and Engineering Facilities and Equipment for ment, and Instruction

spectrometers, and plasma and protein separators; (c) movable furnishings such as bookcases, desks, file cabinets, tables, and simple tools; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; and (e) facilities constructed to house separate components such as medical schools, teaching hospitals and university-controlled research centers; and (f) special separate facilities used to house scientific apparatus such as hypersonic tunnels, accelerators, oceanographic vessels, and computers.

Current-fund expenditures for capital equipment and facilities should be reported in this section and should be excluded from Sections A and B. Expenditures from plant and other funds for facilities and equipment should likewise be included in this section.

Modifications since the 1972 Survey

1) Separate data for medical schools are *not* required. Please include medical school expenditures as part of your institution total.

2) State funds that support research and development at agricultural experiment stations should be considered as State support rather than institution's own funds.

3) The foundation and voluntary health agency lines are now combined.

4) See page 4 for a more complete definition of unreimbursed indirect costs and an example of how such a figure might be developed.

5) A list of Federally Funded Research and Development Centers is provided on page 3.

6) "Computer Sciences" is requested as a separate component of Mathematical Sciences.

7) "Environmental Sciences" is now identified separately for all expenditure data.

8) See page 4 for a definition of departmental research.

9) Reporting of capital expenditures by type of expenditure is no longer required.

10) Report item 3 in percents of the total rather than in actual dollars.

11) Item 4 now includes development.

12) An estimate of the indirect costs allocable to instruction and departmental research is no longer required.

Other Science Resources Publications

REPORTS

	NSF No.	Price
Detailed Statistical Tables. Graduate Science Education: Student Support and Postdoctorals, Fall 1974	75-322	——
Research and Development in Industry, 1973. Funds, 1973; Scientists & Engineers, Jan. 1974	75-315	In press
The 1972 Scientist and Engineer Population Redefined. Volume 1. Demographic, Educational, and Professional Characteristics	75-313	$3.70
Characteristics of Doctoral Scientists and Engineers in the United States, 1973	75-312	$1.15
Detailed Statistical Tables. Characteristics of Doctoral Scientists and Engineers in the United States, 1973	75-312-A	——
Reviews of Data on Science Resources, No. 24. "Work Activities of Employed Doctoral Scientists and Engineers in the U.S. Labor Force, July 1973"	75-310	$0.65
Young and Senior Science and Engineering Faculty, 1974: Support, Research Participation, and Tenure	75-302	$1.70
Projections of Science and Engineering Doctorate Supply and Utilization, 1980 and 1985		

HIGHLIGHTS

"Federal R&D Funding Shows Significant Rise in FY 1976"

"Defense, Space, and Energy Account for Most of Record Increase in Federal R&D Total in 1976"

"National Sample of Scientists and Engineers: Participation in National Programs and Changes in Educational Attainment, 1972-74"

"Racial Minorities in the Scientist and Engineer Population"

"National Sample of Scientists and Engineers: Changes in Employment, 1970-72 and 1972-74"

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es, No. 24, toral	75-310	$0.65
eering arti-	75-302	$1.70

	NSF No.	Price
Projections of Science and Engineering Doctorate Supply and Utilization, 1980 and 1985	75-301	$1.30
HIGHLIGHTS		
"Federal R&D Funding Shows Significant Rise in FY 1976"	75-321	——
"Defense, Space, and Energy Account for Most of Record Increase in Federal R&D Total in 1976"	75-320	——
"National Sample of Scientists and Engineers: Participation in National Programs and Changes in Educational Attainment, 1972-74"	75-317	——
"Racial Minorities in the Scientist and Engineer Population"	75-314	——
"National Sample of Scientists and Engineers: Changes in Employment, 1970-72 and 1972-74"	75-309	——